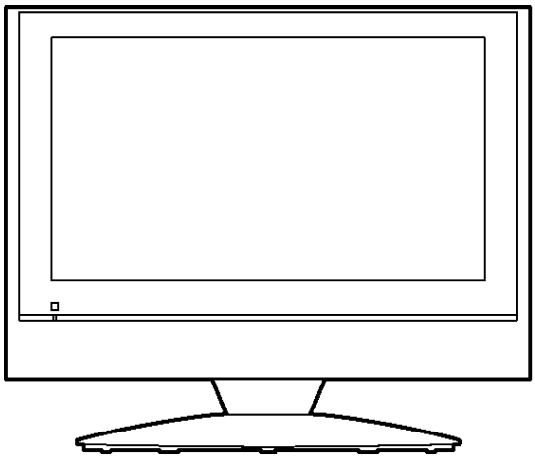
ORDER NO. PCZ0408012C2

Service Manual

Wide LCD TV

TX-22LX2F / TX-22LX2P

LH35 Chassis



SPECIFICATIONS

Power Source

AC 220-240V, 50/60Hz

Power Consumption

Average use: 90W

Standby condition: 1.3W

LCD

Wide XGA (1,280 × 720 pixels)

16 : 9 aspect ratio LCD panel

Screen Size

487.7mm(W) × 274.3mm(H)

Sound

Speaker

12cm × 4cm, 2pcs, 16 Ω

Audio Output

6W (3W + 3W), 10% THD

Headphones

M3 (3.5 mm) Jack × 1

Receiving Systems/ Band name

PAL B, G, H, SECAM B, G SECAM L/L'

VHF E2 - E12	VHF H1 - H2 (ITALY)
VHF A - H (ITALY)	UHF E21 - E69

CATV (S01 - S05)
CATV S1 - S10 (M1 - M10)
CATV S11 - S20 (U1 - U10)
CATV S21 - S41 (Hyperband)

PAL D, K, SECAM D, K

VHF R1 - R2
VHF R3 - R5
VHF R6 - R12
UHF E21 - E69

PAL 525/60

Playback of NTSC tape from some PAL Video recorders (VCR)

M.NTSC

Playback from M.NTSC Video recorders (VCR)

NTSC (AV input only)

Playback from NTSC Video recorders (VCR)

Aerial-Rear

UHF/VHF

Operating Conditions

Temperature: 5°C-35°C

Humidity: 5%-90% RH (non-condensing)

Connection Terminals

AV1 (Scart connecter)

21 Pin terminal (Audio/Video in, Audio/Video out, RGB in, Q-Link)

AV2 (Scart connecter)

21 Pin terminal (Audio/Video in, Audio/Video out, S-Video in, Q-Link)

AV3

VIDEO

RCA PIN Type × 1

S-VIDEO

Mini DIN 4-pin

AUDIO L-R

RCA PIN Type × 2

Dimensions (W x H x D)

Including TV Stand

592mm × 503.1mm × 260mm

TV Set Only

592mm × 420mm × 99mm

Weight

10kg Net

Note:

Design and Specifications are subject to change without notice. Weight and Dimensions shown are approximate.

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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Panasonic®

1. Safety Precautions

1.1. General Guidelines

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.2. Touch-Current Check

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a measuring network for touch currents between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1 .
3. Use Leakage Current Tester (Simpson 228 or equivalent) to measure the potential across the measuring network.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reserve the AC plug in the AC outlet and repeat each of the above measure.
6. The potential at any point (TOUGH CURRENT) expressed as voltage U_1 and U_2 , does not exceed the following values:
   For a. c.: U_1 = 35 V (peak) and U_2 = 0.35 V (peak);
   For d. c.: U_1 = 1.0 V,

Note:
The limit value of U_2 = 0.35 V (peak) for a. c. and U_1 = 1.0 V for d. c. correspond to the values 0.7 mA (peak) a. c. and 2.0 mA d. c.
The limit value U_1 = 35 V (peak) for a. c. correspond to the value 70 mA (peak) a. c. for frequencies greater than 100 kHz.

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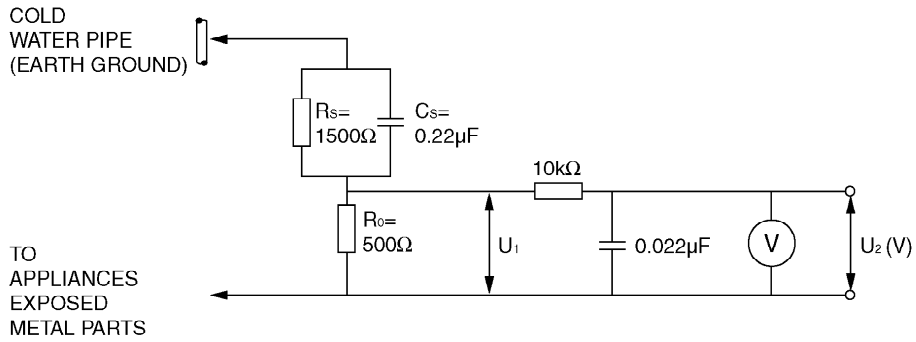
7. **In case a measurement is out of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.**

Figure 1

Measuring network for TOUCH CURRENTS



Resistance values in ohms (Ω)

V: Voltmeter or oscilloscope
(r.m.s. or peak reading)

Input resistance: ≥ 1 MΩ
Input capacitance: ≤ 200 pF
Frequency range: 15 Hz to 1 MHz and d.c. respectively

NOTE - Appropriate measures should be taken to obtain the correct value in case of non-sinusoidal waveforms.

2. Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistorsand semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. **Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, whichshould be removed for potential shock reasons prior to applying power to the unit under test.**
2. **After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as alminum foil, to prevent electrostatic charge buildup or exposure of the assembly.**
3. **Use only a grounded-tip soldering iron to solder or unsolder ES**

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devices.

4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, alminum foil or comparableconductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   Caution

   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise hamless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient todamage an ES device).

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are imporant for safety.
These parts are marked by ⚠ in the schematic diagrams, Exploded Views and replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

3. About lead free solder (PbF)

Note: Lead is listed as (Pb) in the periodic table of elements.
In the information below, Pb will refer to Lead solder, and PbF will refer to Lead Free Solder.
The Lead Free Solder used in our manufacturing process and discussed below is (Sn+Ag+Cu).
That is Tin (Sn), Silver (Ag) and Copper (Cu) although other types are available.
This model uses Pb Free solder in it's manufacture due to environmental conservation issues.
For service and repair work, we'd suggest the use of Pb free solder as well, although Pb solder may be used.
PCBs manufactured using lead free solder will have the PbF within a leaf Symbol

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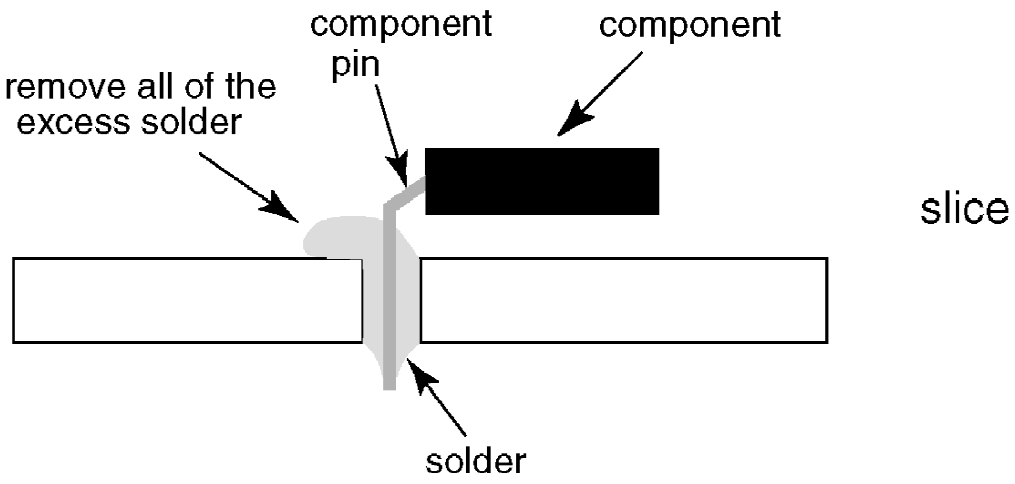
stamped on the back of PCB.

Caution

- Pb free solder has a higher melting point than standard solder. Typically the melting point is 50 ~ 70 °F (30~40°C) higher. Please use a high temperature soldering iron and set it to 700 ± 20 °F (370 ± 10 °C).

- Pb free solder will tend to splash when heated too high (about 1100 °F or 600 °C).
If you must use Pb solder, please completely remove all of the Pb free solder on the pins or solder area before applying Pb solder. If this is not practical, be sure to heat the Pb free solder until it melts, before applying Pb solder.

- After applying PbF solder to double layered boards, please check the component side for excess solder which may flow onto the opposite side. (see figure below)



Suggested Pb free solder

There are several kinds of Pb free solder available for purchase. This product uses Sn+Ag+Cu (tin, silver, copper) solder. However, Sn+Cu (tin, copper), Sn+Zn+Bi (tin, zinc, bismuth) solder can also beused.

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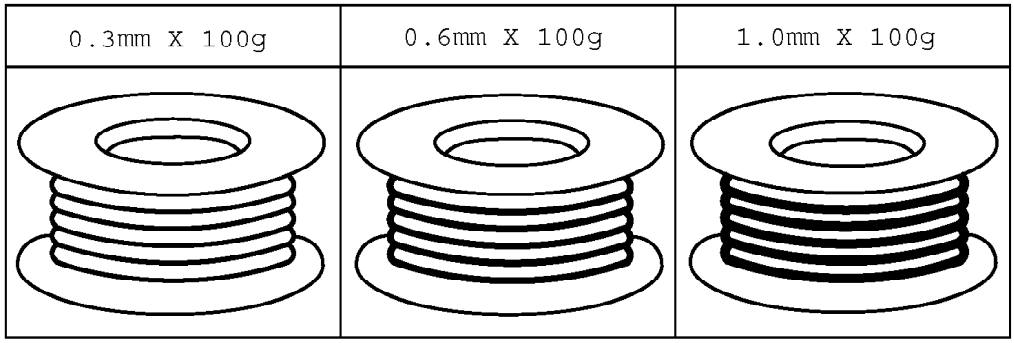
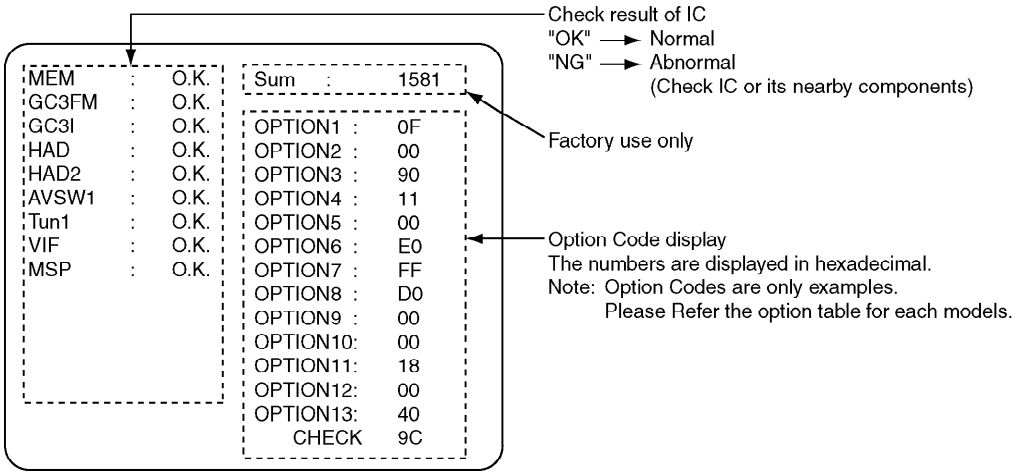


4. Self Check

1. **Self-Check is used to automatically check the bus lines and hexadecimal code of the TV set.**
2. **To get into the Self -Check mode press the Down (-/V) button on the customer controls at the front of the set, at the same time pressing the Recall button on theremote control, and the screen will show :**
3. **Turn off the TV to reset JPEG Viewer circuit after SELF-CHECK.**



If the CCU ports have been checked and found to be incorrect or not located then "--" will appear in place of "O.K.".

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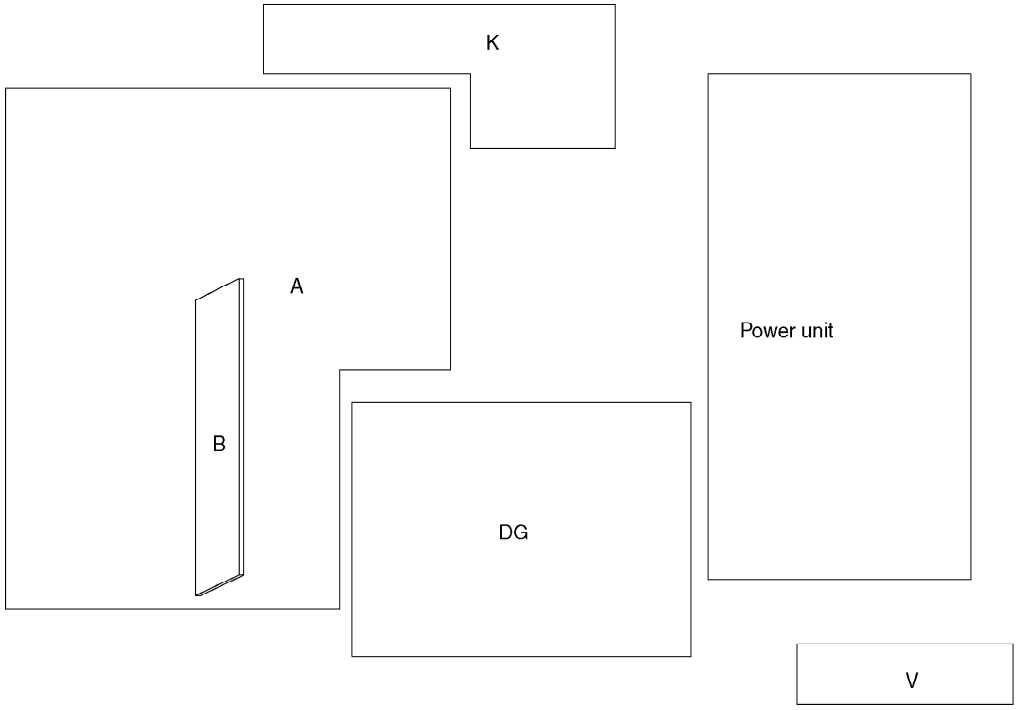
Display	Ref .No.	Description	P.C.B.
MEM	IC1107	EEPROM	DG-Board
GC3FM	IC4017	Global Core MAIN	DG-Board
GC3I	IC4003	Global Core	DG-Board
HAD	IC4001	SCART RGB A/D Converter	DG-Board
HAD2	IC4002	OSD RGB A/D Converter	DG-Board
AVSW1	IC3001	AV Selector	A-Board
Tun1	TU101	Tuner	B-Board
MSP	IC2501	Stereo Decoder	A-Board

5. Chasis Board Layout



Board Name	Function
A-Board	AV Switch, Audio, AV connector, Regulator
DG-Board	Global Core, A/D Converter, MCU
K-Board	Power Switch, Select Switch
V-Board	Remote Reciever, LED ,Headphone
B-Board	Tuner
Power unit	Power (AC/DC) None serviceable. Power unit should be exchanged for service.

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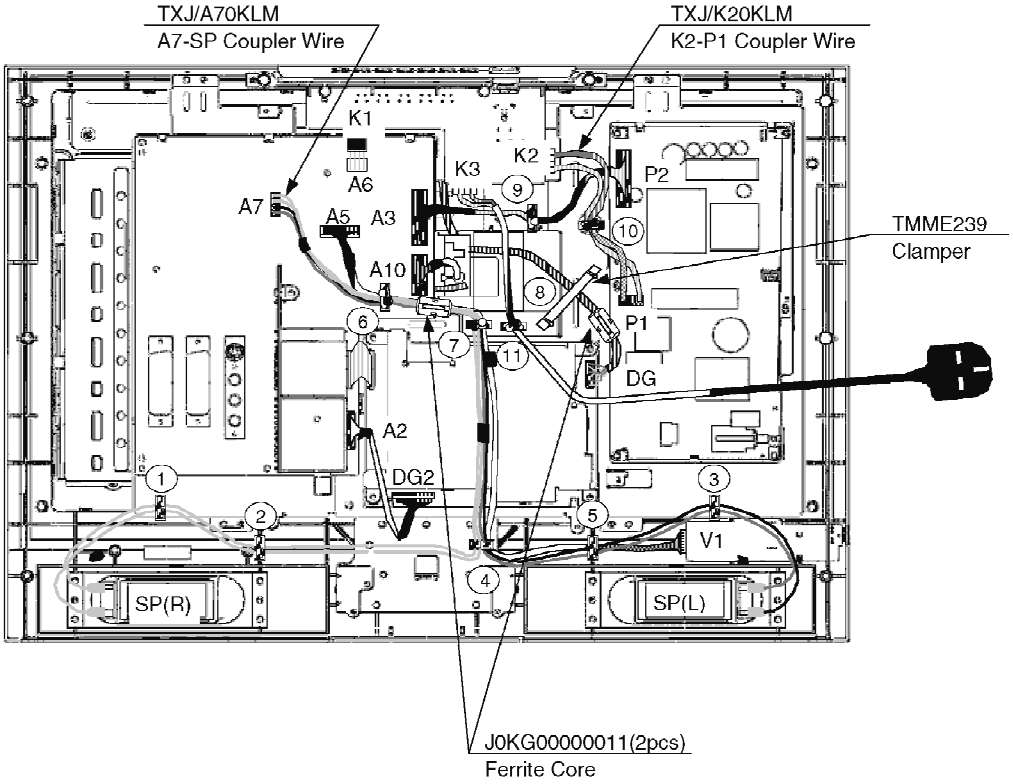
6. Before servicing

6.1. Wire dressing 1

1. **Put a ferrite core to the A5-V1 connection wire and A7-Speaker connection wire, between the clampers “6” and “7”, as illustrated below.**
2. **Put a ferrite core to the DG6-Panel coupler wire, between the wire clamper “8” and DG6 coupler.**
3. **Make a wire dressing as illustrated below.**



4. **Put speaker wires into the slit of front cabinet rib as illustrated below.**

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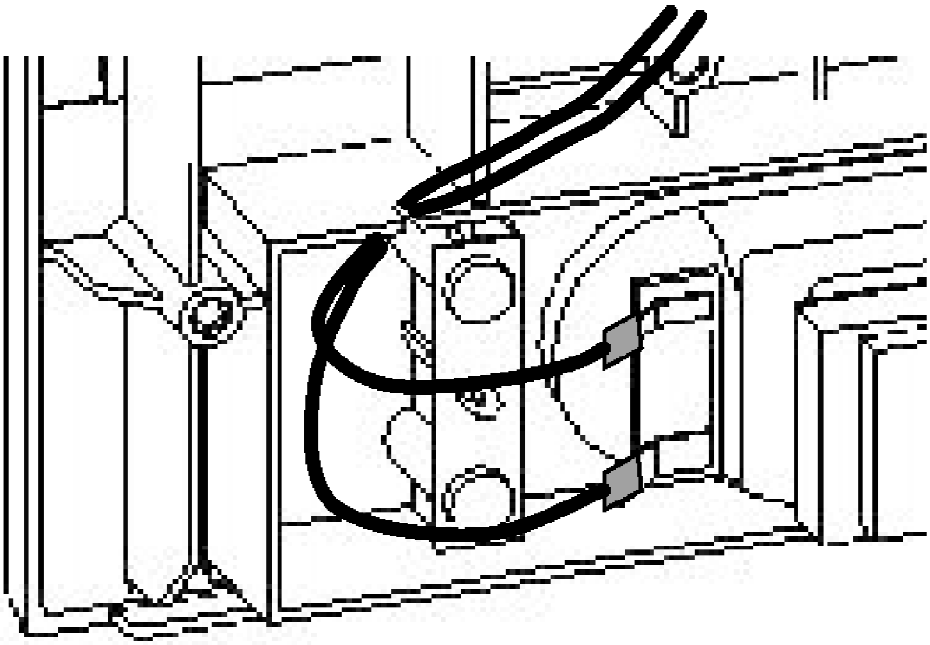

6.2. Wire dressing 2

<Connection>
A5, A7, A10, DG6, K2, P1, Right speaker + (Pink lead wire), Right speaker - (Sky blue lead wire), Left speaker + (Red lead wire), Left speaker - (Blank lead wire)

<Clamping>

Wire \ Clamper	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪
A5 - V1 connection wire				●	●	●	●				
A7 - R & L Speaker connection wire				●		●	●				
DG6 - LCD Panel connection wire								●			
K2 - P1 connection wire										●	
Right speaker connection wire	●	●									
Left speaker connection wire			●		●						
Power cord											●

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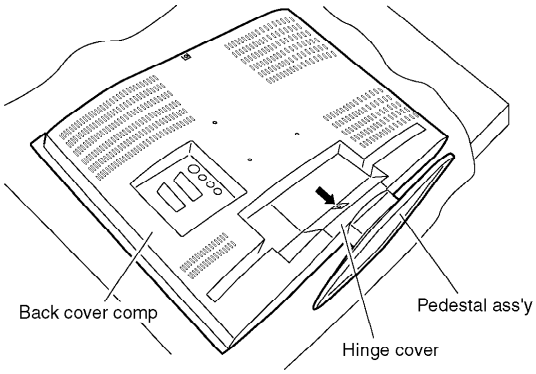
Notes:

1. **Connect every connector surely.**
2. **Mannage wires not to touch any sharp edge of the metal parts.**
3. **manage wires not to have too much tension.**

7. Disassembly for service

7.1. Pedestal ass'y

1. **Lay down the main unit so that the back cover comp faces upward.**
2. **Remove the fixing screw (1pcs ➡).**
3. **Remove the hinge cover.**



4. **Remove the fixing screws (4pcs ➡).**
5. **Remove the pedestal ass'y.**

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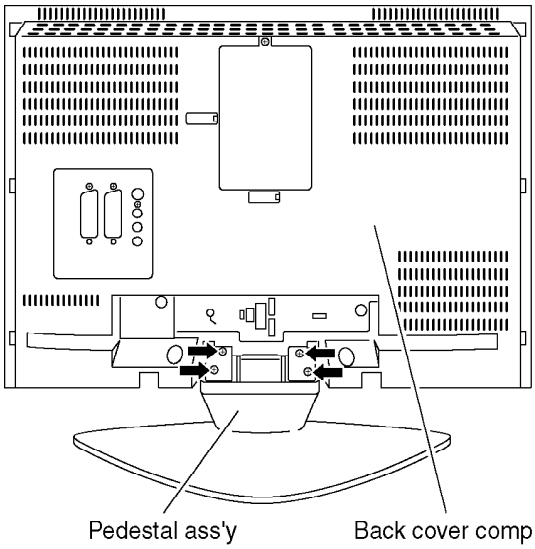
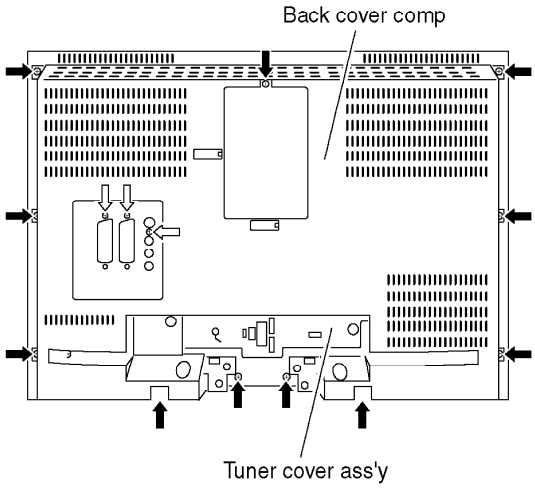


7.2. Back cover comp

1. Remove the pedestal ass'y. (See 7.1.)
2. Remove the fixing screws (11pcs ➡ and 3pcs ⇨).
3. Remove the back cover comp.



7.3. Tuner cover ass'y

1. Remove the back cover comp. (See 7.2.)
2. Remove the AC cord.
3. Remove the fixing screws (2pcs ➡).
4. Remove the tuner cover ass'y.

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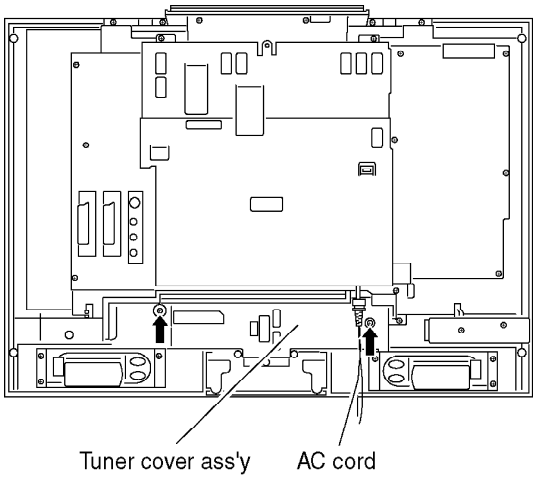
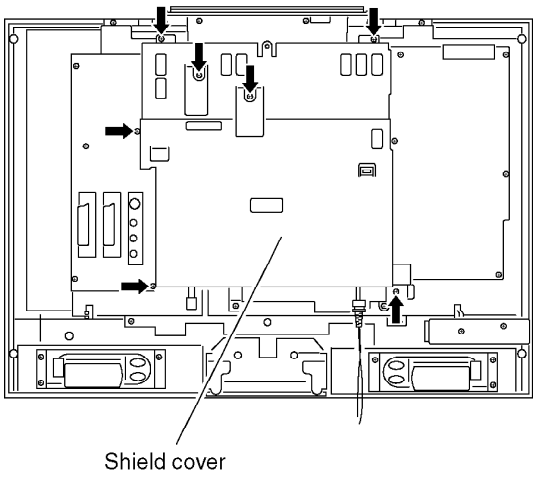


7.4. Shield cover

1. **Remove the back cover comp (See 7.2.) and the tuner cover ass'y. (See 7.3.)**
2. **Remove the fixing screws (7pcs ➡).**
3. **Remove the shield cover.**



7.5. B-Board

1. **Remove the shield cover. (See 7.4.)**
2. **Remove the fixing screw (1pcs ➡).**
3. **Remove the B-Board.**

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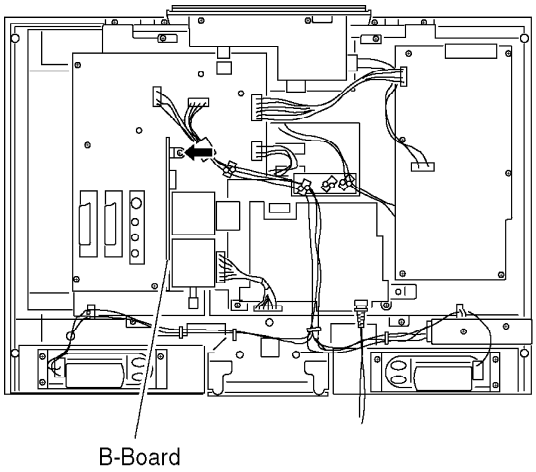
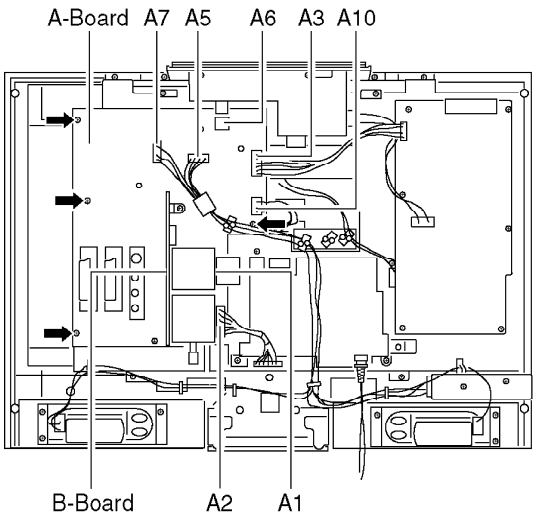


7.6. A-Board

1. **Remove the shield cover. (See 7.4.)**
2. **Remove the B-Board. (See 7.5.)**
3. **Disconnect the couplers (A2, A3, A5, A6, A7 and A10) and the flexible cable (A1).**
4. **Remove the fixing screws (4pcs ➡).**
5. **Remove the A-Board.**



7.7. DG-Board

1. **Remove the shield cover. (See 7.4.)**
2. **Unlock the cable clampers to free the cable.**
3. **Disconnect the couplers (DG1 and DG2) and the flexible cable (DG6).**

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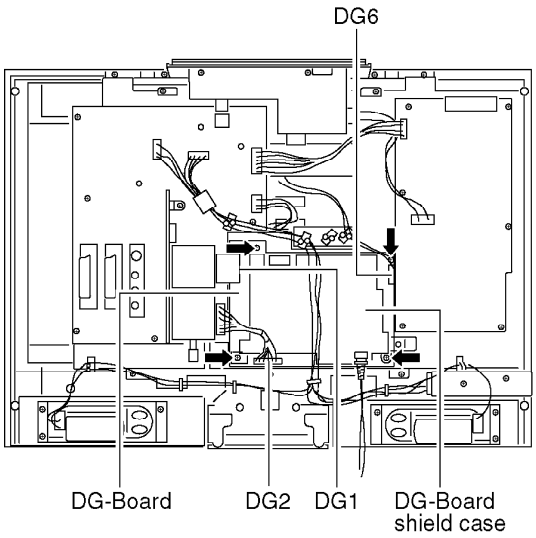
4. Remove the fixing screws (4pcs ➡).

5. Remove the DG-Board shield case.

6. Remove the DG-Board.



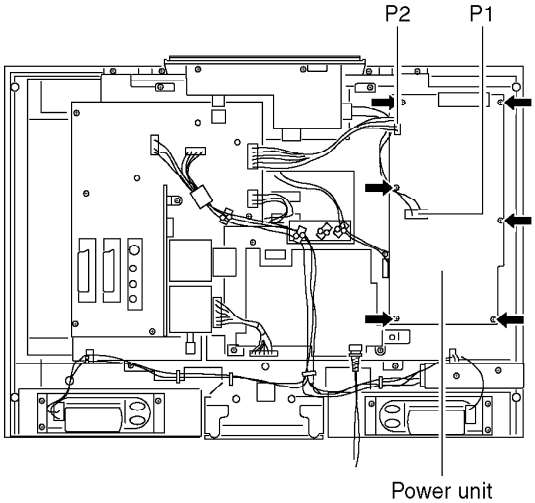
7.8. Power unit

1. Remove the shield cover. (See 7.4.)

2. Disconnect the couplers (P1 and P2).

3. Remove the fixing screws (6pcs ➡).

4. Remove the Power unit.



7.9. K-Board

1. Remove the shield cover. (See 7.4.)

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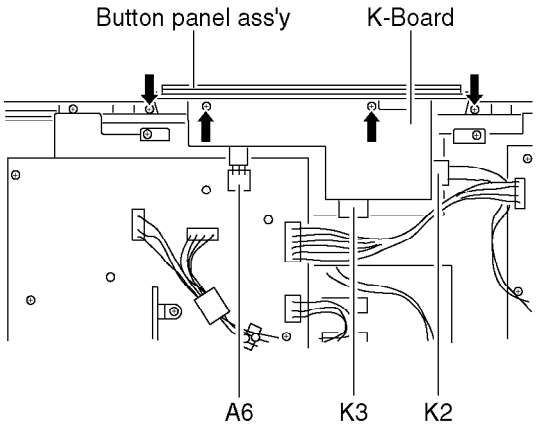
2. Remove the fixing screws (4pcs ➡).

3. Remove the button panel ass'y.

4. Disconnect the couplers (K2, K3 and A6).

5. Remove the K-Board.



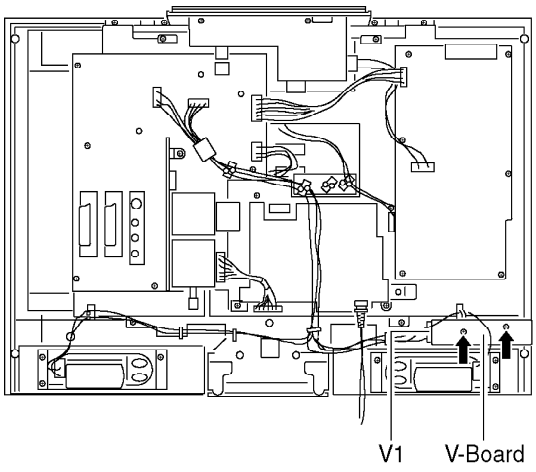
7.10. V-Board

1. Remove the shield cover. (See 7.4.)

2. Remove the fixing screws (2pcs ➡).

3. Disconnect the coupler (V1).

4. Remove the V-Board.



7.11. Speaker (left and right)

1. Remove the V-Board.

2. Disconnect the coupler (A7).

3. Remove the fixing screws (6pcs ➡).

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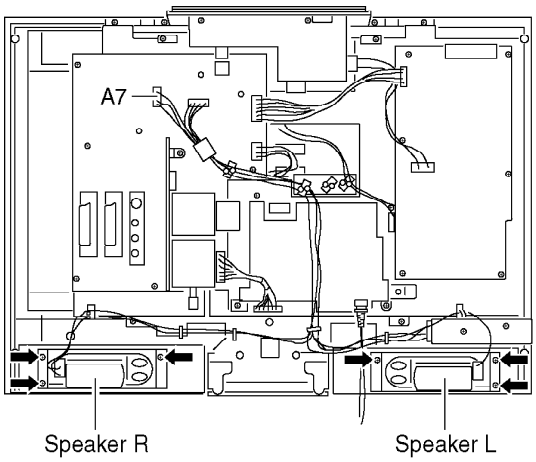
4. Remove the speaker (left and right).



7.12. Main chassis and LCD panel

1. Remove the shield cover. (See 7.4.)

2. Remove the K-Board. (See 7.9.)

3. Unlock the cable clampers to free the cable.

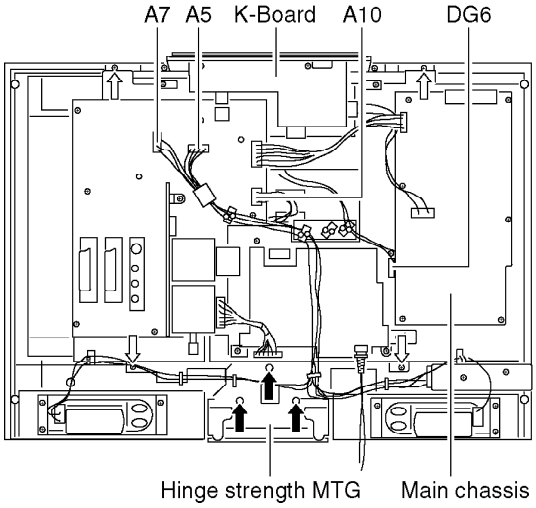
4. Disconnect the couplers (A5, A7, A10 and DG6).

5. Remove the fixing screws (3pcs ➡).

6. Remove the hinge strength MTG.

7. Remove the fixing screws (4pcs ⇨).

8. Remove the main chassis.



9. Remove the LCD panel.

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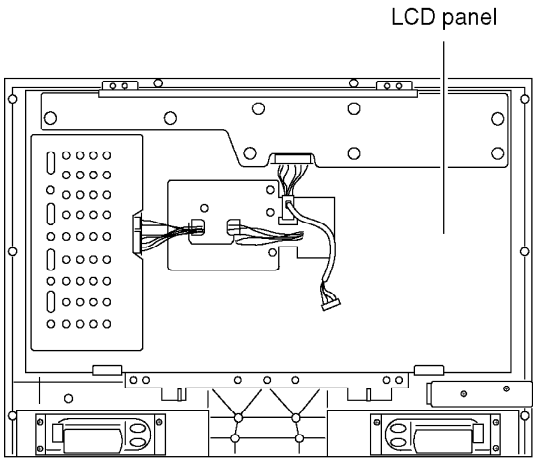

8. Service Mode Function

MPU controls the functions switching for each IICs through IIC bus in this chassis. The following setting and adjustment can be adjusted by remote control in Service Mode.

8.1. How to enter SERVICE 1

1. **In main menu, move to choose sound menu, set BASS to MAXIMUM, and set TREBLE to MINIMUM.**
2. **Simultaneously press INDEX button on remote control and DOWN button [-/V] on the TV set.**

8.2. How to enter SERVICE 2

1. **Select the TEXT Clamp Level (service 1).**
2. **Set the channel to CH99.**
3. **Press HOLD button on remote control.**

Note:

To exit to Service mode, press N or Power button on remote control.

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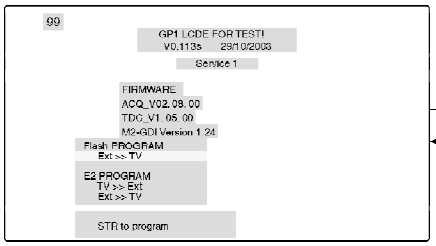
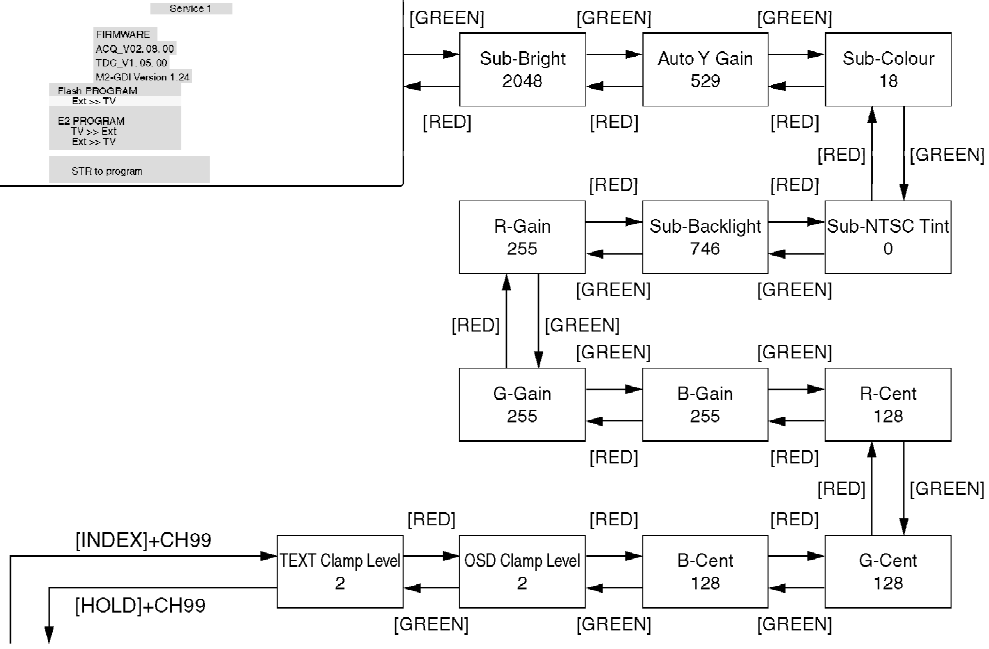
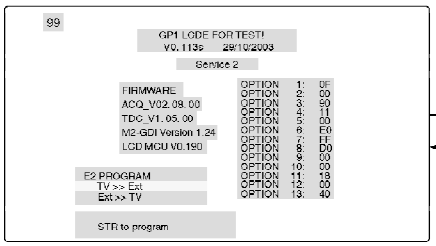
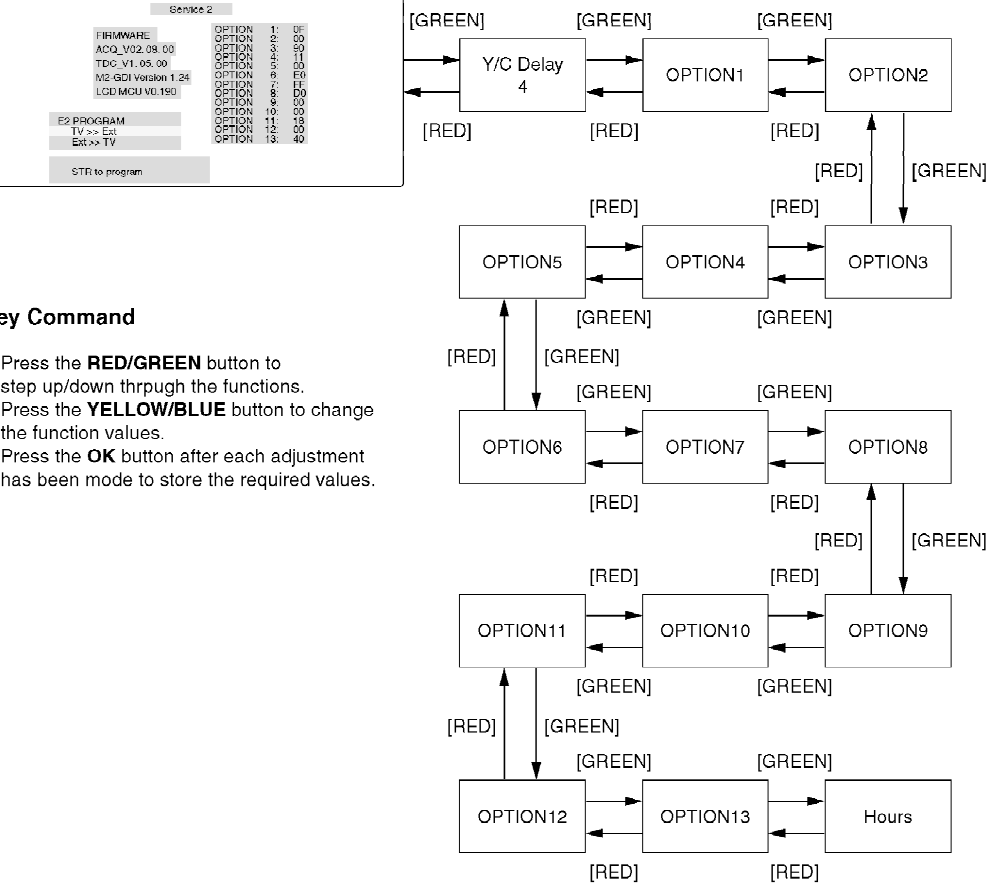
SERVICE 1





SERVICE 2





Key Command

- Press the **RED/GREEN** button to step up/down thrpugh the functions.
- Press the **YELLOW/BLUE** button to change the function values.
- Press the **OK** button after each adjustment has been mode to store the required values.

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8.3. Option Description

option1		0F		
	b0	1	Colour system	Auto(1)
	b1	1		SECAM(1)
	b2	1		NTSC(1)
	b3	1		M.NTSC(1)
	b4	0	free	
	b5	0	free	
	b6	0	free	
	b7	0	PicMenu 3D-Comb	SetupMenu(0)/PictureMenu(1) [except UKmodel(fixed:PictureMenu)]
option2		00		
	b0	0	CH Plan	ASIA / M.E. / HK/UK/ CHINA(1)
	b1	0		NZ/INDNES(1)
	b2	0		AUSTRALIA(1)
	b3	0		E.EUROPE(1)
	b4	0		SPECIAL(1)
	b5	0		AMERICA(1)
	b6	0		CATV(1)
	b7	0		JAPAN(1)
option3		90		
	b0	0	sub picture	without sub-picture (0), with sub-picture (1)
	b1	0	2tuner	2tuner(1),1tuner(0)
	b2	0	VGA	enable(1)
	b3	0	AV5	enable(1)
	b4	1	Wide (16:9)	16:9 (1), 4:3 (0) (change multi window/aspect operation)
	b5	0	JPEG	enable(1)
	b6	0	SIF	I only(0), BG only(1)
	b7	1		I/BG/DK/L(2), BG/DK(3)
option4		11		
	b0	1	A2 enable	enable(1)
	b1	0		not use
	b2	0		not use
	b3	0		not use
	b4	1	NICAM enable	enable(1)
	b5	0		not use
	b6	0		not use
	b7	0		not use
option5		00		
	b0	0	A2 select 6.5MHz	5.742MHz(0) 6.742MHz(1)
	b1	0	NICAM priority	ASIA/M.E.(1)
	b2	0		HK/UK(1)
	b3	0		CHINA(1)
	b4	0		NZ/INDN(1)
	b5	0		AUSTRA(1)
	b6	0		E.EURO(1)
	b7	0		SPECIAL(1)
option6		E0		
	b0	0	Ext. HV input	without HV input(0) / with HV input(1)
	b1	0	SASO enable	SASO enable(1)
	b2	0	Noise mute	Noise mute enable(0)
	b3	0	Monitor out AV1 mute	Monitor out AV1 mute(1)
	b4	0	Tuner no refresh	Refresh tuner (0), no refresh (1)
	b5	1	Tuner	MACO tuner (1), Others (0)
	b6	1	HYPER	UHF only (0), UHF/VHF (1)
	b7	1	IF I2C	I2C controlled Tuner IF module (1)
option7		FF		
	b0	1	Power up EC-Mode	Power on EC enable (1)
	b1	1	CH Blanking	Blanking enable (1)
	b2	1	AV Blanking	Blanking enable (1)
	b3	1	Auto WIDE	WSS enable only in aspect Auto (0), WSS always enable (1)
	b4	1	Volume correction	TV Volume coorrection enable (1)
	b5	1	AVLink	Q-Link off selectable in menu (1)
	b6	1	MPX/ NICAM display	Display NICAM (0), Display MPX (1)
	b7	1	Owner ID	not use

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option8		D0		
	b0	0	Teletext CH Refresh	not use
	b1	0	Geomagnetic Sensor	Geomagnetic sensor enable(1)
	b2	0	Geomagnetic Polarity	Geomagnetic polarity +(0), -(1)
	b3	0	RF Attenuation	Enable(1)
	b4	1	Fine tuning	Enable(1)
	b5	0	Search speed	Slow(1) Fast(0)
	b6	1	TEXT	Enable(1)
	b7	1	TEXT TOP	TOP enable (1)
option9		00		
	b0	0	Jpeg auto start	enable (1)
	b1	0	3D Subwoofer	Subwoofer enable (1) Dolby model should be 0.
	b2	0	Dolby Virtual	Dolby Virtual enable (1)
	b3	0	Amp	with Amp(0) / without Amp(1)
	b4	0	SoundExt.DA	without SoundExt.DA(0) / with SoundExt.DA(1)
	b5	0	shipping Sound menu	MUSIC(0) / CINEMA(1)
	b6	0	Volume curve	Volume curve1(0), curve2(1)
	b7	0	LIPSYNC	LIPSYNC enable (1)
option10		00		
	b0	0	OSD language	not use
	b1	0	ACI all country / Lang	ACI enable(1), only Netherlands(0)
	b2	0	ACI auto MP	ACI auto multi package enable (1)
	b3	0	ACI offset	ACI offset for VCR prog. enable(1)
	b4	0	Blue Back	not use
	b5	0	Auto Aspect	Reserved
	b6	0	Protect XPR	Reserved
	b7	0	Protect 5V detect	Protection input enable(1)
option11		18		
	b0	0	Acuity Demo	enable(1)
	b1	0	Picture Shift	enable(1)
	b2	0	Shop mode	enable(1)
	b3	1	User aspectJust	enable(1)
	b4	1	User aspect 14:9	enable(1)
	b5	0	NICAM C4 bit	enable(1)
	b6	0	ID-1	enable(1)
	b7	0	1080I	enable(1)
option12		00	**Option**	
	b0	0	Asia	Asia(1),europe(0)
	b1	0	Australia	not use
	b2	0	Ireland /India	Ireland(1)
	b3	0	UK	UK(1)
	b4	0	MELCOA	not use
	b5	0	28 inch	not use
	b6	0	Large size	not use
	b7	0	free	
option13		40	**Temporary**	
	b0	0	Jpeg Burn Protect	Enable(0), Disable(1)
	b1	0	Tuner IF 38.9	38.9MHz(0). 39.5MHz(1) [UK/Ireland]
	b2	0	NewALBD	Zoom1 or Zoom3 (0), Zoom1 or 14:9(1)
	b3	0		not use
	b4	0	Viewing Mode	Each Mode(1) / Each Source(0)
	b5	0	TEXT refresh for Euro	enable(0), disable when TV(1)
	b6	1	Still	enable(1)
	b7	0	PicMenu AI/MPEG	Enable(0) [except UKmodel (fixed:Disable)]

9. Adjustment method

9.1. Video Signal Level Adjustment

9.1.1. RF video

Instrument Name	Connect to	Remarks
Remote controller **Internal signal (studio color bar)**	**RF input**	

1. Receive full color bar by RF signal input.
(Aspect mode : wide, Viewing mode: standard, LCD AI: OFF)

2. Go to "Auto Y Gain" under Service 1 and make automatic

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adjustment of video signal level by the blue key.

- When Service 1 appears, presetting takes place automatically as shown below.
- Sharpness: 0
- AI: OFF
- 3D-Comb filter: On

3. Press STR key to write the value of adjustment results to EEPROM.
4. Check that the automatic adjustment of video signal level has completed normally.

- When the adjustment is completed normally, the "Auto Y Gain" color turns black.

Note:
In the adjustment mode, the M2 MCU changes automatically to the mode shown in the left.

9.2. WB Adjustment

Instrument Name	Connect to	Remarks
1. Remote controller 2. LCD WB meter (Minolta CS-1000 equivalent) 3. Communication jig 4. Computer for external control		Correlation can be also taken by CA-110 or equivalent

- Basically perform checking using the production software and make automatic adjustment using external computer.
- Let the panel stand for more than 3 hours at more than 20°C.
- Basically perform assemble to completion in the ambient environment of room temperature more than 20°C.
- The aging time is more than 20 min at above room temperature.

1. Enter into WB adjustment in the plant adjustment mode and measure the WHITE brightness data to check that it is higher than 400 cd /m_2
   (When it is below 400 cd /m_2 , make re-measurement in 30 minutes

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after cold-on.)

2. **For the Excel calculation sheet, use "LX1 series, calculation software".**
3. **Using the jig, measure the brightness and chromaticity coordinates of single colors, white, red, green and blue, at the maximum brightness (using basic data) and calculate the gamma data corrected at the maximum brightness using Excel calculationsheet on the external computer.**
4. **Write the values calculated in 3 above in the gamma data part in EEPROM.**
   EEPROM Adr :
   0C58h - 0C5Bh, 0C5Ch - C5Fh ...R(color temperature Normal)
   0C08h - 0C0Bh, 0C0Ch - 0C0Fh ...G(color temperature Normal)
   0C30h - 0C33h, 0C34h - 0C37h ...B(color temperature Normal)
5. **Reflect the data in 4 above and select gray and measure the brightness and chromaticity coordinate at that time and calculate the gamma data (color temperature, normal) and cool and warm color temperatures, corrected at half-tone, using theexternal computer.**
6. **Write the values calculated in 5 above in the gamma data part in EEPROM.**
   EEPROM Adr:
   0C58h - 0C5Bh, 0C5Ch - 0C5Fh ...R(color temperature Normal)
   0C08h - 0C0Bh, 0C0Ch - 0C0Fh ...G(color temperature Normal)
   0C30h - 0C33h, 0C34h - 0C37h ...B(color temperature Normal)
   0C50h - 0C53h, 0C54h - 0C57h ...R(color temperature Warm)
   0C00h - 0C03h, 0C04h - 0C07h ...G(color temperature Warm)
   0C28h - 0C2Bh, 0C2Ch - 0C2Fh ...B(color temperature Warm)
   0C60h - 0C63h, 0C64h - 0C67h ...R(color temperature Cool)
   0C10h - 0C13h, 0C14h - 0C17h ...G(color temperature Cool)
   0C38h - 0C3Bh, 0C3Ch - 0C3Fh ...B(color temperature Cool)
7. **Reflect the data in 6 above and CHECK that the chromaticity coordinates at check and GRAY, are within the values given below.**
   CHECK: x= 0.264 ± 0.005 y= 0.269 ± 0.005
   GRAY: x= 0.268 ± 0.005 y= 0.267 ± 0.005

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- When writing data into EEPROM, make this procedure after sending the WP (write protect) cancellation command (70 88 00).

Also, WP (write protect) setting command is 70 88 FF.

8. EEPROM DATA saving place for WB (gamma data) backup

<Housing address> <Writing address>

0C18h - 0C1Bh → 0C08h - 0C0Bh
0C1Ch - 0C1Fh → 0C0Ch - 0C0Fh
0C40h - 0C43h → 0C30h - 0C33h
0C44h - 0C47h → 0C34h - 0C37h
0C68h - 0C6Bh → 0C58h - 0C5Bh
0C6Ch - 0C6Fh → 0C5Ch - 0C5Fh

Note:
After completion of adjustment, record the completion time if it took more than 35 minutes after aging.
LCD panels that do not fit in to the above check specification shall be discussed separately.

10. Conductor Views

10.1. A-Board

10.2. DG-Board

10.3. B, K, and V-Board

11. Block and Schematic Diagrams

11.1. Schematic DiagramNotes

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Important Safety Notice

Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacture's specified parts.

Notes:

1. **Resistor**
   All resistors are cabon 1/4W resistor, unless marked as follows:
   Unit of resistance is OHM [Ω] (K=1,000, M=1,000,000).
2. **Capacitor**
   Unit of capacitance is μF, unless otherwise noted.
3. Coil
   Unit of inductance is μF, unless otherwise noted.
4. Test Point
   ○ : Test Point position
5. Earth Symbol
   ⏚ : Chassis Earth (Cold) ⏚ : Line Earth (Hot)
6. Voltage Measurement
   Voltage is measured by a DC voltmeter.
   Conditions of the measurement are the following:
   Power Source ..... AC 220-240V, 50/60Hz
   Receiving Signal ..... Colour Bar signal (RF)
   All customer's controls ..... Maximum positions
7. When arrow mark (↗) is found, connection is easily found from the direction of arrow
8. Indicates the major signal flow. : Video ➡ Audio ⇨
9. This schematic diagram is the latest at the time of printing and subject to change without notice.

TX-22LX2F/P
Schematic Diagram Notes

Remarks:

1. The Power Circuit contains a circuit area which uses a separate power supply to isolate the earth connection.
   The circuit is defined by HOT and COLD indications in the schematic diagram. Take the follwing precautions.
   All circuits, except the Power Circuit, are cold.
   Precautions
   a. Do not touch the hot part or the hot and cold parts at the same time or you may be shocked.
   b. Do not short- circuit the hot and cold circuits or a fuse may blow and parts may break.
   c. Do not connect an instrument, such as an oscilloscope, to the hot and cold circuits simultaneously or a fuse may blow.
      Connect the earth of instruments to the earth connection of the circuit being measured.
   d. Make sure to disconnect the power plug before removing the chassis.

TX-22LX2F/P
Schematic Diagram Notes

11.2. Main Block Diagram

11.3. Power Block Diagram

11.4. Signal Block Diagram

11.5. A-Board (1 of 2) Schematic Diagram

11.6. A-Board (2 of 2) Schematic Diagram

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11.7. DG-Board (1 of 7) Schematic Diagram

11.8. DG-Board (2 of 7) Schematic Diagram

11.9. DG-Board (3 of 7) Schematic Diagram

11.10. DG-Board (4 of 7) Schematic Diagram

11.11. DG-Board (5 of 7) Schematic Diagram

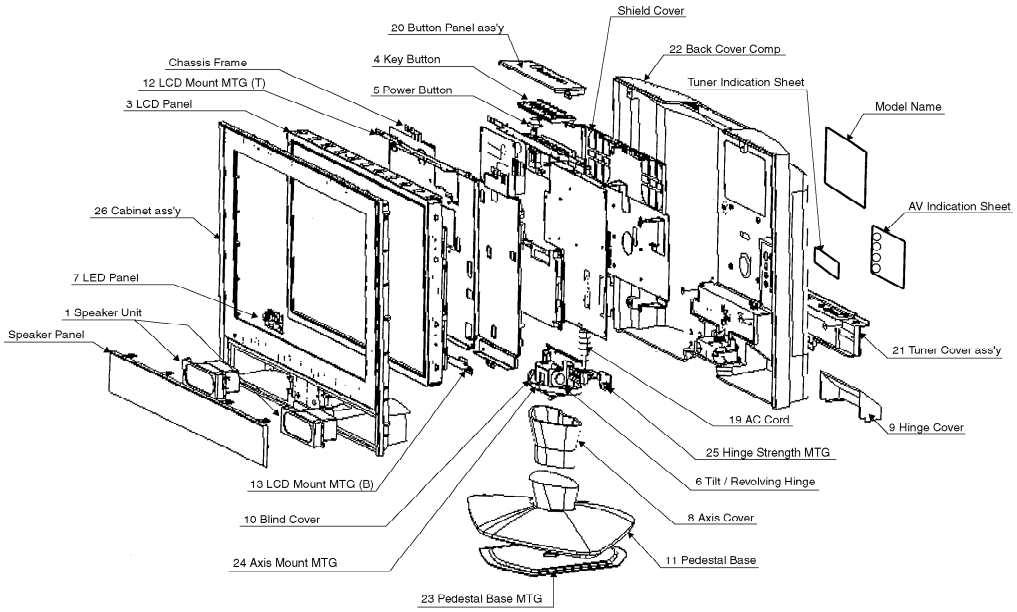
11.12. DG-Board (6 of 7) Schematic Diagram

11.13. DG-Board (7 of 7) Schematic Diagram

11.14. B, K, and V-Board Schematic Diagram

12. Parts Location & Mechanical Replacement Parts List

12.1. Parts Location



12.2. Packing Exploded Views

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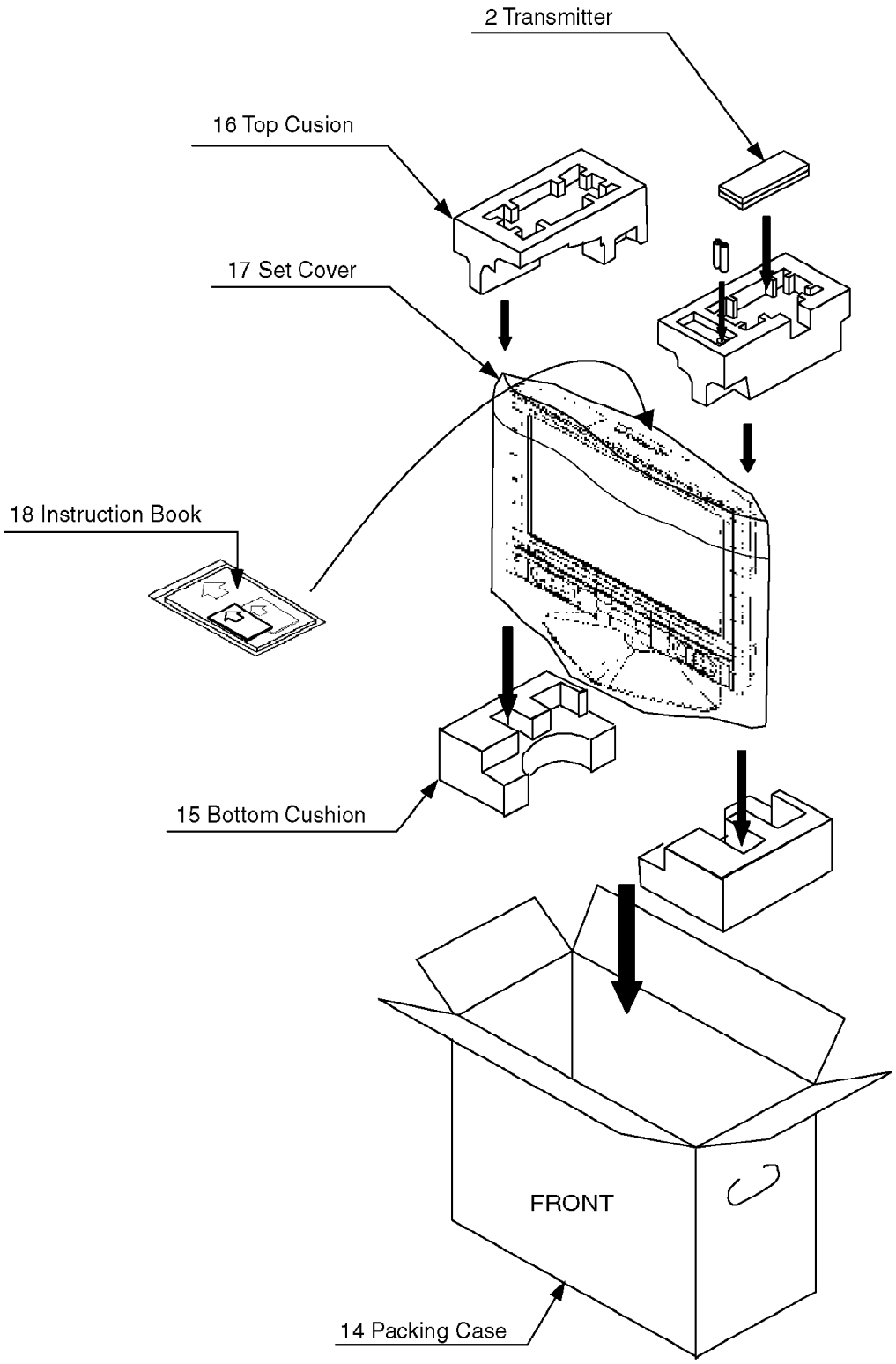

12.3. Mechanical Replacement Parts List

Note:
All parts except parts mentioned [MELUK] in the Remarks column are supplied by AVC-SPC.
Parts mentioned [MELUK] are supplied by MELUK.

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Ref No.	Parts No.	Part Name & Description	Pcs	Remarks
1	EASG12S504A2	SPEAKER UNIT	2	
2	EUR7636040	TRANSMITTER	1	MELUK
	J0KG00000011	FERRITE CORE	2	
3	L5EDD5Q00002	LCD PANEL	1	MELUK ⚠
	N0AC3GH00001	POWER UNIT	1	⚠
	TBLG3037	FOOT RUBBER	8	MELUK
	TBMA148	PANASONIC BADGE	1	MELUK
4	TBXA43401	KEY BUTTON	1	MELUK
5	TBXA43501	POWER BUTTON	1	
6	TEJA083	TILT/REVOLVING HINGE	1	MELUK
	THEJ006	SCREW	4	MELUK
	THNA014U	NUT	1	MELUK
7	TKKC5185	LED PANEL	1	
	TKKL5290	C0NNECTOR COVER	2	
	TKPA87101	BUTTON PANEL	1	MELUK
8	TKPA87201	AXIS COVER	1	
9	TKXA17401	HINGE COVER	1	
10	TKXA17501	BLIND COVER	1	
11	TKXA17601	PEDESTAL BASE	1	
12	TKZC5025	LCD MOUNT MTG(T)	1	MELUK
13	TKZC5026	LCD MOUNT MTG(B)	1	MELUK
	TMM6428-1	CLAMPER	1	
	TMM7443-3	CLAMPER	2	
	TMM7464-2	CLAMPER	2	
	TMM76416-1	CLAMPER	3	
	TMM8E17934	BUBBLE CLAMPER	1	MELUK
	TMME047	CLAMPER	2	
	TMME237	CLAMPER	2	
	TMME239	CLAMPER	1	MELUK
14	TPC0E60501	PACKING CASE	1	MELUK ⚠
15	TPD0E0042	BOTTOM CUSHION	1	MELUK
16	TPD0E0043	TOP CUSHION	1	MELUK
17	TPE0E4011	SET COVER	1	MELUK
	TQA0E1027	SCHEMATIC DIAGRAM	1	MELUK TX-22LX2F
	TQA0E1028	SCHEMATIC DIAGRAM	1	MELUK TX-22LX2P
18	TQB0E0068A	INSTRUCTION BOOK(GERMAN)	1	MELUK TX-22LX2F ⚠
18	TQB0E0068B	INSTRUCTION BOOK(DUTCH)	1	MELUK TX-22LX2F ⚠
18	TQB0E0068C	INSTRUCTION BOOK(ITALIAN)	1	MELUK TX-22LX2F ⚠
18	TQB0E0068D	INSTRUCTION BOOK(FRENCH)	1	MELUK TX-22LX2F ⚠
18	TQB0E0068E	INSTRUCTION BOOK(SPANISH)	1	MELUK TX-22LX2F ⚠
18	TQB0E0068F	INSTRUCTION BOOK(SWEDISH)	1	MELUK TX-22LX2F ⚠
18	TQB0E0068K	INSTRUCTION BOOK(DANISH)	1	MELUK TX-22LX2F ⚠
18	TQB0E0068U	INSTRUCTION BOOK(ENGLISH)	1	MELUK TX-22LX2F ⚠
18	TQB0E0069M	INSTRUCTION BOOK(BULGARIAN)	1	MELUK TX-22LX2P ⚠
18	TQB0E0069N	INSTRUCTION BOOK(ROMANIAN)	1	MELUK TX-22LX2P ⚠
18	TQB0E0069P	INSTRUCTION BOOK(POLISH)	1	MELUK TX-22LX2P ⚠
18	TQB0E0069Q	INSTRUCTION BOOK(HUNGARIAN)	1	MELUK TX-22LX2P ⚠
18	TQB0E0069R	INSTRUCTION BOOK(CZECH)	1	MELUK TX-22LX2P ⚠

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Ref No.	Parts No.	Part Name & Description	Pcs	Remarks
18	TQB0E0069U	INSTRUCTION BOOK(ENGLISH)	1	MELUK TX-22LX2P ⚠
19	TSX0E105	AC CODE	1	MELUK ⚠
	TSXL373	FFC(50P/A2-DG1)	1	MELUK
20	TTPA0368	BUTTON PANEL ASS'Y	1	MELUK
21	TTPA0369	TUNER COVER ASS'Y	1	MELUK
22	TTUA0945	BACK COVER COMP	1	MELUK TX-22LX2F ⚠
22	TTUA0946	BACK COVER COMP	1	MELUK TX-22LX2P ⚠
23	TUXA183	PEDESTAL BASE MTG	1	
24	TUXJ162	AXIS MOUNT MTG	1	
25	TUXJ163	HINGE STRENGTH MTG	1	
26	TXFKY010KLM	CABINET ASS'Y	1	MELUK ⚠
	XTB4+15J	SCREW	13	MELUK
	XTB4+15JFZ	SCREW	29	
	XTV3+10J	SCREW	2	
	XTV3+16GFZ	SCREW	3	
	XTV3+8J	SCREW	2	
	XTV3+8JFZ	SCREW	2	
	XTW3+10T	SCREW	2	
	XTW3+12T	SCREW	2	
	XTW3+8T	SCREW	24	
	XYN3+J8	SCREW	2	
	XZBT6530	FAN BAG	1	MELUK

13. Replacement Parts List

13.1. Replacement Parts List

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Important Safety Notice

Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

RTL (Retention Time Limited)

Note: The marking (RTL) indicates that the Retention Time is Limited for this item.
After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention.
After the end of this period, the assembly will no longer be available.

Abbreviation of part name and description

1. Resistor

Example:

ERD25TJ104 C 100KOHM, J, 1/4W
Type Allowance

Type	Allowance
C : Carbon	F : ±1%
F : Fuse	G : ±2%
M : Metal Oxide Metal FIlm	J : ±5%
S : Solid	K : ±10%
W : Wire Wound	M : ±20%

2. Capacitor

Example:

ECKF1H103ZF C 0.01UF, Z, 50V
Type Allowance

Type	Allowance
C : Ceramic	C : ±0.25pF
E : Electrolytic	D : ±0.5pF
P : Polyester Polyprop lene	F : ±1pF
	G : ±3pF
	J : ±5pF
T : Tantalum	K : ±10pF
	L : ±15pF
	M : ±20pF
	P : +100%, -0%
	Z : +80%, -20%

13.2. Electrical Replacement Parts List

Note:
All parts except parts mentioned [MELUK] in the Remarks column are supplied by AVC-SPC.
Parts mentioned [MELUK] are supplied by MELUK.

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
A1	K1MN50A00005	50P CONNECTOR	1	
A2	K1KA12A00176	12P CONNECTOR	1	
A3	K1KA24A00041	24P CONNECTOR	1	MELUK
A5	K1KA09A00074	9P CONNECTOR	1	MELUK
A6	K1KB04Z00002	4P CONNECTOR	1	
A7	K1KA04A00195	4P CONNECTOR	1	
A8	K1KA15A00117	15P CONNECTOR	1	
A9	K1KA09A00062	9P CONNECTOR	1	
A10	K1KA20A00272	20P CONNECTOR	1	
B1	K1KB15B00021	15P CONNECTOR	1	
B2	K1KB09B00013	9P CONNECTOR	1	
C102	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C103	ECJ1VF1C105Z	C 1UF, Z, 16V	1	
C104	ECJ1VF1C105Z	C 1UF, Z, 16V	1	
C105	F2A0J331A137	E 330UF, 6.3V	1	
C106	ECJ1VF1H104Z	C 0.1UF, Z, 50V	1	
C107	F2A0J331A137	E 330UF, 6.3V	1	
C203	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C207	ECEA0JKA470B	E 47UF, 6.3V	1	
C208	ECJ1VF1H104Z	C 0.1UF, Z, 50V	1	
C209	ECJ1VF1H104Z	C 0.1UF, Z, 50V	1	
C801	F2A1H101A122	E 100UF, 50V	1	
C802	F2A1C471A250	E 470UF, 16V	1	
C804	F2A1H101A122	E 100UF, 50V	1	
C805	F2A1C331A250	E 330UF, 6.3V	1	
C806	F2A0J101A133	E 1000UF, 6.3V	1	
C807	F2A0J3310041	E 330UF, 6.3V	1	
C808	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C809	F2A0J101A133	E 1000UF, 6.3V	1	
C810	F2A0J3310041	E 330UF, 6.3V	1	
C812	F2A1H331A122	E 330UF, 50V	1	MELUK
C813	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C814	F2A1C471A121	E 470UF, 16V	1	
C815	F2A0J331A133	E 330UF, 6.3V	1	MELUK
C823	ECJ1VB1H682K	C 6800PF, K, 50V	1	
C827	F2A1C470A121	E 47UF, 16V	1	
C828	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C830	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C831	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C832	ECA1AM470B	E 47UF, 10V	1	
C833	F2A1C101A159	E 100UF, 16V	1	
C834	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C835	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C836	ECA1AM470B	E 47UF, 10V	1	
C837	F2A1C101A159	E 100UF, 16V	1	
C839	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1001	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C1002	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C1011	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1012	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1013	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1014	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C1015	F2H1C470A009	E 47UF, 16V	1	
C1016	F2H1C470A009	E 47UF, 16V	1	
C1017	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1018	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1020	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1021	ECJ1VB1C103K	C 0.01UF, K, 16V	1	
C1101	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C1102	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1104	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C1114	F2H1C470A009	E 47UF, 16V	1	
C1115	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1116	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1117	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1118	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C1119	F2H1C100A009	E 10UF, 16V	1	
C1120	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C1121	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1122	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C1123	F2H0G221A005	E 220UF, 4V	1	
C1124	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1126	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C1128	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1129	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1130	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C1131	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1132	ECJ1VC1H151J	C 150PF, J, 50V	1	
C1134	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C1135	ECJ1VC1H220J	C 22PF, J, 50V	1	
C1136	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C1137	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C1138	ECJ1VB1H221K	C 220UF, K, 50V	1	
C1139	ECJ1VC1H220J	C 22PF, J, 50V	1	
C1140	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C1142	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C1143	ECJ1VB1H221K	C 220UF, K, 50V	1	
C1144	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1146	F2H1C100A009	E 10UF, 16V	1	
C1147	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C1148	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C1149	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1150	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1153	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1154	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C1161	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C1162	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C1165	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1167	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C1171	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1173	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C1174	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C1175	F2H0G101A005	E 100UF 4V	1	
C1176	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C1177	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C1178	ECJ1VC1H271J	C 270PF, J, 50V	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C1179	ECJ1VC1H271J	C 270PF, J, 50V	1	
C1180	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1181	ECJ1VC1H271J	C 270PF, J, 50V	1	
C1182	ECJ1VC1H271J	C 270PF, J, 50V	1	
C1183	ECJ1VC1H271J	C 270PF, J, 50V	1	
C1184	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C1185	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C1186	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1193	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C1194	ECJ1VB0J105K	C 1UF, K, 16V	1	
C1195	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C1196	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C1197	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1198	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C1199	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C1200	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C2025	F2A0J331A133	E 330UF, 6.3V	1	MELUK
C2026	F2A1C101A121	E 100UF, 16V	1	
C2027	F2A1C101A121	E 100UF, 16V	1	
C2028	F2A1C220A121	E 22UF, 16V	1	
C2029	ECJ1VF1A225Z	C 22UF, Z, 10V	1	
C2030	ECJ1VF1A225Z	C 22UF, Z, 10V	1	
C2101	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C2102	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C2104	ECJ1VF1H104Z	C 0.1UF, Z, 50V	1	
C2106	ECJ1VF1H104Z	C 0.1UF, Z, 50V	1	
C2108	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C2109	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C2111	F2A1C471A121	E 470UF, 16V	1	
C2112	F2A1C470A121	E 47UF, 16V	1	
C2113	ECJ1VB1H682K	C 6800PF, K, 50V	1	
C2114	ECJ1VB1H682K	C 6800PF, K, 50V	1	
C2116	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C2117	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C2120	ECJ1VC1H561J	C 560PF, J, 50V	1	
C2121	ECJ1VC1H561J	C 560PF, J, 50V	1	
C2122	ECJ1VC1H561J	C 560PF, J, 50V	1	
C2123	ECJ1VC1H561J	C 560PF, J, 50V	1	
C2124	F2A1C220A121	E 22UF, 16V	1	
C2200	ECJ1VF1H104Z	C 0.1UF, Z, 50V	1	
C2201	F2A1H100A120	E 10UF, 50V	1	
C2202	F2A1C220A121	E 22UF, 16V	1	
C2203	F2A0J101A131	E 1000UF, 6.3V	1	
C2204	F2A0J101A131	E 1000UF, 6.3V	1	
C2209	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C2210	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C2501	ECJ1VC1H560J	C 56PF, J, 50V	1	
C2502	ECJ1VC1H100C	C 10PF, C, 50V	1	
C2503	ECJ1VC1H220J	C 22PF, J, 50V	1	
C2504	ECJ1VC1H470J	C 47PF, J, 50V	1	
C2506	ECJ1VC1H010C	C 1PF, C, 50V	1	
C2507	ECJ1VC1H010C	C 1PF, C, 50V	1	
C2508	ECJ1VF1H104Z	C 0.1UF, Z, 50V	1	
C2509	ECJ1VC1H470J	C 47PF, J, 50V	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C2510	F2A0J101A131	E 1000UF, 6.3V	1	
C2511	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C2512	F2A1H100A120	E 10UF, 50V	1	
C2513	ECJ1VF1H104Z	C 0.1UF, Z, 50V	1	
C2514	F2A0J101A131	E 1000UF, 6.3V	1	
C2515	ECJ1VB0J105K	C 1UF, K, 16V	1	
C2516	F2A1H3R3A120	E 3.3UF, 50V	1	
C2517	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C2518	ECJ1VF1H104Z	C 0.1UF, Z, 50V	1	
C2519	F2A1C470A121	E 47UF, 16V	1	
C2520	F2A1H100A120	E 10UF, 50V	1	
C2521	F2A1H100A120	E 10UF, 50V	1	
C2522	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C2523	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C2526	ECJ2FF1C475Z	C 0.047UF, Z, 16V	1	
C2527	ECJ2FF1C475Z	C 0.047UF, Z, 16V	1	
C2528	ECJ1VF1C474Z	C 0.47UF, Z, 16V	1	
C2529	ECJ1VB1H102K	C 1000PF, K, 50V	1	
C2530	ECJ1VB1H102K	C 1000PF, K, 50V	1	
C2531	ECJ1VB1H102K	C 1000PF, K, 50V	1	
C2532	ECJ1VB1H102K	C 1000PF, K, 50V	1	
C3001	ECJ1VB1H102K	C 1000PF, K, 50V	1	
C3002	ECJ1VB1H102K	C 1000PF, K, 50V	1	
C3003	ECJ1VB1H102K	C 1000PF, K, 50V	1	
C3004	ECJ1VB1H102K	C 1000PF, K, 50V	1	
C3005	ECJ1VB1H102K	C 1000PF, K, 50V	1	
C3006	ECJ1VB1H102K	C 1000PF, K, 50V	1	
C3007	ECJ1VF1C105Z	C 1UF, Z, 16V	1	
C3008	ECJ1VF1C105Z	C 1UF, Z, 16V	1	
C3009	ECJ1VF1C105Z	C 1UF, Z, 16V	1	
C3010	ECJ1VF1C105Z	C 1UF, Z, 16V	1	
C3011	ECA1CEN220B	E 22UF, 16V	1	
C3012	F2A1C470A121	E 47UF, 16V	1	
C3013	ECJ1VF1C105Z	C 1UF, Z, 16V	1	
C3014	ECA1CEN220B	E 22UF, 16V	1	
C3015	ECJ1VF1C105Z	C 1UF, Z, 16V	1	
C3016	ECJ1VF1C105Z	C 1UF, Z, 16V	1	
C3017	ECJ1VF1H104Z	C 0.1UF, Z, 50V	1	
C3018	ECA1CM470B	E 47UF, 16V	1	
C3019	ECJ1VF1C105Z	C 1UF, Z, 16V	1	
C3020	ECJ1VF1C105Z	C 1UF, Z, 16V	1	
C3021	ECJ1VF1C105Z	C 1UF, Z, 16V	1	
C3022	ECJ1VF1C105Z	C 1UF, Z, 16V	1	
C3023	ECJ1VB1A105K	C 0.01UF, Z, 50V	1	
C3024	ECJ1VC1H561J	C 560PF, J, 50V	1	
C3025	ECJ1VC1H561J	C 560PF, J, 50V	1	
C3027	ECJ1VC1H561J	C 560PF, J, 50V	1	
C3029	ECJ1VC1H561J	C 560PF, J, 50V	1	
C3032	ECJ1VC1H271J	C 270PF, J, 50V	1	
C3033	ECJ1VC1H271J	C 270PF, J, 50V	1	
C3034	ECJ1VC1H271J	C 270PF, J, 50V	1	
C3035	ECJ1VC1H271J	C 270PF, J, 50V	1	
C3037	ECA1CEN100B	E 10UF, 16V	1	
C3039	ECA1CEN100B	E 10UF, 16V	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C3041	ECA1CEN100B	E 10UF, 16V	1	
C3042	ECJ1VF1C105Z	C 1UF, Z, 16V	1	
C3043	ECJ1VF1C105Z	C 1UF, Z, 16V	1	
C3044	ECJ1VC1H561J	C 560PF, J, 50V	1	
C3045	ECJ1VF1C105Z	C 1UF, Z, 16V	1	
C3046	ECJ1VC1H561J	C 560PF, J, 50V	1	
C3047	ECJ1VF1C105Z	C 1UF, Z, 16V	1	
C3048	ECJ1VF1C105Z	C 1UF, Z, 16V	1	
C3049	ECJ1VC1H561J	C 560PF, J, 50V	1	
C3050	ECJ1VC1H561J	C 560PF, J, 50V	1	
C3053	ECJ1VF1C105Z	C 1UF, Z, 16V	1	
C3054	ECJ1VF1C105Z	C 1UF, Z, 16V	1	
C3055	ECJ1VF1C105Z	C 1UF, Z, 16V	1	
C3056	ECA1CEN100B	E 10UF, 16V	1	
C3057	ECJ1VF1C105Z	C 1UF, Z, 16V	1	
C3060	ECA1CEN100B	E 10UF, 16V	1	
C3061	F2A0J101A131	E 1000UF, 6.3V	1	
C3062	F2A0J101A131	E 1000UF, 6.3V	1	
C3063	F2A1H4R7A120	E 4.7UF, 50V	1	
C3064	F2A1H2R2A120	E 2.2UF, 50V	1	
C3065	F2A1C470A121	E 47UF, 16V	1	
C3066	ECJ1VF1C105Z	C 1UF, Z, 16V	1	
C3067	ECJ1VF1H104Z	C 0.1UF, Z, 50V	1	
C3070	ECJ1VC1H181J	C 180PF, J, 50V	1	
C3071	ECJ1VC1H181J	C 180PF, J, 50V	1	
C3072	ECJ1VC1H181J	C 180PF, J, 50V	1	
C3074	ECA1CEN100B	E 10UF, 16V	1	
C3075	ECA1CEN100B	E 10UF, 16V	1	
C3076	ECA1CEN100B	E 10UF, 16V	1	
C4002	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4025	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4026	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4027	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4028	ECJ3YB0J106M	C 10UF, M,6.3V	1	
C4029	ECJ3YB0J106M	C 10UF, M,6.3V	1	
C4030	ECJ3YB0J106M	C 10UF, M,6.3V	1	
C4031	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4032	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4033	ECJ1VC1H390J	C 39PF, J, 50V	1	
C4034	ECJ1VC1H390J	C 39PF, J, 50V	1	
C4035	ECJ1VC1H390J	C 39PF, J, 50V	1	
C4036	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C4037	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4038	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4039	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4040	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4041	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4044	F2H0G470A005	E 47UF, 50V	1	
C4045	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4046	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4047	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4048	ECJ1VC1H560J	C 56PF, J, 50V	1	
C4049	ECJ1VC1H560J	C 56PF, J, 50V	1	
C4050	ECJ1VC1H560J	C 56PF, J, 50V	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C4051	ECJ1VC1H180J	C 18PF, J, 50V	1	
C4052	ECJ1VC1H180J	C 18PF, J, 50V	1	
C4053	ECJ1VC1H180J	C 18PF, J, 50V	1	
C4054	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4055	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4056	ECJ1VC1H101J	C 100PF, J, 50V	1	
C4057	ECJ1VC1H101J	C 100PF, J, 50V	1	
C4058	ECJ1VC1H101J	C 100PF, J, 50V	1	
C4059	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4060	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4061	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4062	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4064	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C4066	ECJ3YB0J106M	C 10UF, M,6.3V	1	
C4068	ECJ3YB0J106M	C 10UF, M,6.3V	1	
C4069	ECJ3YB0J106M	C 10UF, M,6.3V	1	
C4070	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4072	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4073	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4074	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4076	ECJ1VC1H101J	C 100PF, J, 50V	1	
C4077	ECJ1VC1H101J	C 100PF, J, 50V	1	
C4078	ECJ1VC1H101J	C 100PF, J, 50V	1	
C4079	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4080	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4082	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4083	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4084	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4085	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4086	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4087	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4088	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4089	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4091	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4092	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4093	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4094	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4096	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4097	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4098	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4099	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4100	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4101	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4102	ECJ1VC1H150J	C 15PF, J, 50V	1	
C4104	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4105	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4106	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4107	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4108	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4109	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4110	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4111	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4112	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4114	ECJ1VB0J105K	C 1UF, K, 16V	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C4115	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4116	ECJ1VF1C105Z	C 1UF, Z, 16V	1	
C4117	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4118	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4119	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4121	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4122	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4123	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4124	F2H0G470A005	E 47UF, 50V	1	
C4126	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4127	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4128	ECJ1VC1H101J	C 100PF, J, 50V	1	
C4129	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4131	F2H0G101A005	E 100UF 4V	1	
C4132	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4133	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4134	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4136	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4144	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4145	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C4146	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4147	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4148	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4152	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4153	ECJ1VC1H180J	C 18PF, J, 50V	1	
C4155	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4156	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4158	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4159	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C4160	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C4161	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4162	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4163	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C4164	ECJ1VB1C103K	C 0.01UF, K, 16V	1	
C4167	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C4179	ECJ1VC1H560J	C 56PF, J, 50V	1	
C4181	ECJ1VC1H180J	C 18PF, J, 50V	1	
C4185	ECJ1VC1H151J	C 150PF, J, 50V	1	
C4186	ECJ1VC1H220J	C 22PF, J, 50V	1	
C4193	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4194	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4197	ECJ3YB0J106K	C 10UF, M,6.3V	1	
C4201	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4203	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C4204	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4205	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4207	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C4208	F2H1C470A009	E 47UF, 16V	1	
C4209	ECJ1VC1H680J	C 68PF, J, 50V	1	
C4215	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4217	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4219	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4223	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4224	F2H0G470A005	E 47UF, 50V	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C4225	ECJ1VC1H680J	C 68PF, J, 50V	1	
C4226	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4228	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4229	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4230	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4231	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4232	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4233	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4234	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4235	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4236	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4237	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4238	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4239	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4240	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4241	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4245	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4247	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4251	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4256	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4257	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4258	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4266	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4267	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4269	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4272	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4274	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4275	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4276	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4278	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4283	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4290	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4292	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4297	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4298	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4303	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4304	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4305	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4306	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4307	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4308	F2H0G221A005	E 220UF, 4V	1	
C4309	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4310	F2H0G221A005	E 220UF, 4V	1	
C4311	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4312	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4313	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4314	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4315	ECJ3YB0J106K	C 10UF, M,6.3V	1	
C4316	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4317	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4318	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4319	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4320	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4321	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C4322	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4323	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4324	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4325	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4326	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4328	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4329	ECJ3YB0J106K	C 10UF, M,6.3V	1	
C4330	F2H0G221A005	E 220UF, 4V	1	
C4331	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4332	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4333	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4334	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4335	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4336	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4337	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4338	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4339	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4340	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4341	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4342	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4343	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4344	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4345	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4346	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4347	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4348	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4349	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4370	F1H1A1050002	C 1UF, Z, 10V	1	
C4371	F2H1C470A009	E 47UF, 16V	1	
C4372	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4376	ECJ1VC1H101J	C 100PF, J, 50V	1	
C4382	ECJ1VC1H101J	C 100PF, J, 50V	1	
C4389	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4392	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4393	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4394	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4395	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4396	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4397	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4398	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4399	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4400	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4401	ECJ1VB0J334K	C 0.33UF, K, 16V	1	
C4402	ECJ1VB1H682K	C 6800PF, K, 50V	1	
C4403	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4404	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4405	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4406	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4407	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4408	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4409	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4410	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4411	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4412	ECJ1VB0J105K	C 1UF, K, 16V	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C4413	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4414	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4415	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4416	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4417	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4418	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4419	ECJ1VC1H471J	C 470PF, J, 50V	1	
C4420	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4421	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4422	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4423	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4424	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4425	ECJ1VC1H121J	C 120PF, J, 50V	1	
C4426	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4427	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4428	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4429	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4430	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4431	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4432	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4433	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4434	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4435	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4436	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4437	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4438	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4439	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4440	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4441	F2H0G221A005	E 220UF, 4V	1	
C4443	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4444	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4445	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4446	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4447	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4448	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4449	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4450	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4451	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4452	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4453	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4454	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4456	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4457	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4458	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4459	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4460	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4461	F2H0G101A005	E 100UF 4V	1	
C4463	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4470	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4471	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4472	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4477	ECJ1VB1H103K	C 0.01UF, K, 50V	1	
C4478	ECJ1VF1H104Z	C 0.1UF, Z, 50V	1	
C4487	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C4488	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4489	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4490	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4491	F2H0G221A005	E 220UF, 4V	1	
C4492	F2H1C1000003	E 10UF, 16V	1	
C4496	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4497	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4498	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4499	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4500	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4501	ECJ1VB0J225K	C 2.2UF, K, 6.3V	1	
C4502	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4503	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4511	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4517	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4518	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4519	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4520	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4533	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4534	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4535	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4536	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4537	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4538	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4539	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4540	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C4541	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C4542	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C4543	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C4544	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C4545	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C4546	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C4547	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C4548	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C4549	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4550	ECJ1VB1C104K	C 0.1UF, Z, 16V	1	
C4555	ECJ1VB0J105K	C 1UF, K, 16V	1	
C4556	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4557	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4558	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C4559	ECJ1VC1H102J	C 1000PF, J, 50V	1	
C6801	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C6803	F2H0J101A010	E 100UF, 6.3V	1	
C9001	F2H0G470A005	E 47UF, 50V	1	
C9149	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C9150	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C9151	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C9152	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C9153	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C9154	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C9155	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C9170	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C9171	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C9172	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C9173	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C9174	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C9175	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C9176	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
D101	MAZ302000L	DIODE	1	MELUK
D102	MAZ302000L	DIODE	1	MELUK
D103	MAZ80620ML	ZENER DIODE	1	MELUK
D104	MAZ80620ML	ZENER DIODE	1	MELUK
D205	B3CKE0000006	DIODE	1	
D209	MAZ80560ML	ZENER DIODE	1	
D210	MAZ80560ML	ZENER DIODE	1	
D211	MAZ80560ML	ZENER DIODE	1	
D212	MAZ80560ML	ZENER DIODE	1	
D801	B0JCKG000001	DIODE	1	
D802	B0JCKG000001	DIODE	1	
D803	B0JCME000025	DIODE	1	
D804	B0JCME000025	DIODE	1	
D807	MAZ81300HL	ZENER DIODE	1	MELUK
D808	MA2J11100L	DIODE	1	
D809	MAZ81300HL	ZENER DIODE	1	MELUK
D810	MA2J11100L	DIODE	1	
D2003	MA3X152E0L	DIODE	1	
D2004	MA3X157A0L	DIODE	1	
D2005	MA2J11100L	DIODE	1	
D2008	MA3X152E0L	DIODE	1	
D3001	MAZ81000HL	ZENER DIODE	1	
D3002	MAZ81000ML	ZENER DIODE	1	
D3003	MAZ81000ML	ZENER DIODE	1	
D3004	MA3X152K0L	DIODE	1	
D3037	MAZ81400ML	ZENER DIODE	1	
D3038	MAZ81400ML	ZENER DIODE	1	
D4004	MAZ80620ML	ZENER DIODE	1	MELUK
D4005	MAZ80620ML	ZENER DIODE	1	MELUK
D4006	MAZ80620ML	ZENER DIODE	1	MELUK
D4007	MAZ80620ML	ZENER DIODE	1	MELUK
D4008	MAZ80620ML	ZENER DIODE	1	MELUK
D4011	MAZ80620ML	ZENER DIODE	1	MELUK
D4012	MAZ80620ML	ZENER DIODE	1	MELUK
DG1	K1MN50A00005	50P CONNECTOR	1	
DG2	K1KA12A00126	12P CONNECTOR	1	
DG6	K1KA20A00272	20P CONNECTOR	1	
DG13	K1KA09A00077	9P CONNECTOR	1	
FL1014	J0HABB000003	LC FILTER	1	
FL1015	J0HABB000003	LC FILTER	1	
FL1019	J0HABB000004	LC FILTER	1	
FL1020	J0HABB000004	LC FILTER	1	
FL1022	ELKE103FA	NOISE FILTER	1	
FL1023	ELKE103FA	NOISE FILTER	1	
FL1024	ELKE103FA	NOISE FILTER	1	
FL1025	ELKE103FA	NOISE FILTER	1	
FL1026	ELKE103FA	NOISE FILTER	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
FL1027	ELKE103FA	NOISE FILTER	1	
FL1028	ELKE103FA	NOISE FILTER	1	
FL1029	J0HABB000004	LC FILTER	1	
FL1030	J0HABB000004	LC FILTER	1	
FL1037	ELKE103FA	NOISE FILTER	1	
FL4019	J0JBD0000043	CHIP INDUCTOR	1	
FL4020	J0JBD0000043	CHIP INDUCTOR	1	
FL4021	J0JBD0000043	CHIP INDUCTOR	1	
FL9031	J0HABB000004	LC FILTER	1	
FL9032	J0HABB000004	LC FILTER	1	
IC801	C0DAAZG00006	IC	1	
IC802	C0DAAZG00006	IC	1	
IC803	AN77L08M-E1	IC	1	MELUK
IC804	C0DAAZG00011	IC	1	
IC805	C0DAAZG00011	IC	1	
IC806	C0DBZHE00019	IC	1	
IC807	C0DBZHE00019	IC	1	
IC1104	C2CBYF000028	IC	1	
IC1105	C0JBAS000185	IC	1	
IC1107	TVRN392	IC	1	MELUK TX-22LX2F
IC1107	TVRN393	IC	1	MELUK TX-22LX2P
IC1108	C0EBE0000336	IC	1	
IC1109	C0JBBZ000281	IC	1	
IC1111	C0JBAB000591	IC	1	
IC1113	C0JBAE000231	IC	1	
IC1114	C3ABPG000133	IC	1	
IC1115	TVRN246	IC	1	MELUK
IC2100	AN17821A	IC	1	MELUK
IC2200	C1BB00000787	IC	1	
IC2501	C1AB00001942	IC	1	
IC3001	C1AB00000459	IC	1	MELUK
IC4001	C1AB00001834	IC	1	
IC4002	C1AB00001834	IC	1	
IC4003	C1AB00001926	IC	1	
IC4004	C0CBCBD00008	IC	1	
IC4005	C0CBCBD00008	IC	1	
IC4011	C0CBCAC00095	IC	1	
IC4012	C0CBCAD00012	IC	1	
IC4014	C0ABBA000134	IC	1	
IC4017	C1AB00001868	IC	1	
IC4020	C0CBCAC00096	IC	1	
IC4021	C0CBCBC00062	IC	1	
IC4022	C3ABPJ000065	IC	1	
IC4023	C3ABPJ000065	IC	1	
IC4024	C0JBAZ001769	IC	1	
IC4025	C0JBCZ000512	IC	1	
IC4029	C0ABBA000138	IC	1	
IC4030	C0CBCAD00012	IC	1	
IC4101	C0JBAB000382	IC	1	
IC9000	C0CBCBD00008	IC	1	
IC9001	C0CBAYG00011	IC	1	
JK201	K2HC103B0015	JACK	1	MELUK

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
JK3001	K1FB121A0006	JACK	1	
JK3002	K1FB121A0006	JACK	1	
JK3003	K1U411A00004	JACK	1	
JS201	ERJ6GEY0R00V	M 0 OHM,J,1/10W	1	
JS202	ERJ6GEY0R00V	M 0 OHM,J,1/10W	1	
JS801	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS802	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS803	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS808	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS811	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS812	ERJ6GEY0R00V	M 0 OHM,J,1/10W	1	
JS813	ERJ6GEY0R00V	M 0 OHM,J,1/10W	1	
JS1000	ERJ6GEY0R00V	M 0 OHM,J,1/10W	1	
JS1001	ERJ6GEY0R00V	M 0 OHM,J,1/10W	1	
JS1002	ERJ6GEY0R00V	M 0 OHM,J,1/10W	1	
JS1003	ERJ6GEY0R00V	M 0 OHM,J,1/10W	1	
JS1004	ERJ6GEY0R00V	M 0 OHM,J,1/10W	1	
JS1005	ERJ6GEY0R00V	M 0 OHM,J,1/10W	1	
JS1006	ERJ6GEY0R00V	M 0 OHM,J,1/10W	1	
JS1008	ERJ6GEY0R00V	M 0 OHM,J,1/10W	1	
JS1009	ERJ6GEY0R00V	M 0 OHM,J,1/10W	1	
JS1016	ERJ6GEY0R00V	M 0 OHM,J,1/10W	1	
JS1017	ERJ6GEY0R00V	M 0 OHM,J,1/10W	1	
JS1018	ERJ6GEY0R00V	M 0 OHM,J,1/10W	1	
JS1034	ERJ6GEY0R00V	M 0 OHM,J,1/10W	1	
JS1035	ERJ6GEY0R00V	M 0 OHM,J,1/10W	1	
JS1036	ERJ6GEY0R00V	M 0 OHM,J,1/10W	1	
JS2003	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS2004	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS2005	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS2006	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS2007	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS2008	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS3000	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS3005	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS3007	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS4014	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS4050	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS4051	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS4053	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS4054	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS4086	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS4087	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS4090	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS4095	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	TX-22LX2F
JS4096	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	TX-22LX2P
JS4113	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS4114	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS4115	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS4116	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS4117	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
JS4118	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
K1	K1KA04A00383	4P CONNECTOR	1	
K2	K1KA02B00134	2P CONNECTOR	1	MELUK
K3	K1KA02B00134	2P CONNECTOR	1	MELUK
L101	ELJPA330KF	CHIP INDUCTOR	1	
L102	ELJPA330KF	CHIP INDUCTOR	1	
L103	ELJPA330KF	CHIP INDUCTOR	1	
L201	J0JCC0000364	CHIP INDUCTOR	1	
L202	J0JCC0000364	CHIP INDUCTOR	1	
L802	G0A101ZA0041	PEAKING COIL	1	
L804	G0A221ZA0041	CHOKE COIL	1	
L806	G0A221ZA0041	CHOKE COIL	1	
L808	G0A471ZA0041	CHOKE COIL	1	
L1101	G1C330K00017	INDUCTOR COIL	1	
L1103	G1C330K00017	INDUCTOR COIL	1	
L1104	G1C330K00017	INDUCTOR COIL	1	
L1106	ELJFA8R2KF	CHIP INDUCTOR	1	MELUK
L1108	J0JGC0000021	CHIP INDUCTOR COIL	1	
L1109	J0JHC0000078	CHIP INDUCTOR	1	
L1110	J0JHC0000078	CHIP INDUCTOR	1	
L1111	J0JHC0000078	CHIP INDUCTOR	1	
L1112	J0JHC0000078	CHIP INDUCTOR	1	
L1113	J0JHC0000078	CHIP INDUCTOR	1	
L2000	G1C330K00017	INDUCTOR COIL	1	
L2501	ELJFA6R8MF	CHIP INDUCTOR	1	MELUK
L2503	ELESN180JA	PEAKING COIL	1	MELUK
L2505	ELESN330JA	PEAKING COIL	1	MELUK
L2507	G1C330K00017	INDUCTOR COIL	1	
L3001	EXC3BB221H	BEAD CHOKE	1	
L3002	EXC3BB221H	BEAD CHOKE	1	
L3003	ELESN330JA	PEAKING COIL	1	MELUK
L3004	EXC3BB221H	BEAD CHOKE	1	
L3005	EXC3BB221H	BEAD CHOKE	1	
L3006	EXC3BB221H	BEAD CHOKE	1	
L3007	J0JHC0000001	CHIP INDUCTOR	1	
L3008	J0JHC0000001	CHIP INDUCTOR	1	
L3009	ELESN101JA	PEAKING COIL	1	
L3010	EXC3BB221H	BEAD CHOKE	1	
L3011	EXC3BB221H	BEAD CHOKE	1	
L3012	EXC3BB221H	BEAD CHOKE	1	
L3013	EXC3BB221H	BEAD CHOKE	1	
L3014	EXC3BB221H	BEAD CHOKE	1	
L4004	J0JCC0000241	CHIP INDUCTOR	1	
L4005	J0JHC0000078	CHIP INDUCTOR	1	
L4007	G1C6R8K00005	INDUCTOR COIL	1	MELUK
L4008	G1C6R8K00005	INDUCTOR COIL	1	MELUK
L4009	G1C6R8K00005	INDUCTOR COIL	1	MELUK
L4010	J0JCC0000241	CHIP INDUCTOR	1	
L4011	J0JCC0000241	CHIP INDUCTOR	1	
L4018	G1C6R8K00005	INDUCTOR COIL	1	MELUK
L4019	J0JCC0000241	CHIP INDUCTOR	1	
L4020	G1C100KA0009	INDUCTOR COIL	1	MELUK
L4021	J0JCC0000241	CHIP INDUCTOR	1	
L4024	J0JHC0000078	CHIP INDUCTOR	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
L4025	G1C100KA0009	INDUCTOR COIL	1	MELUK
L4028	J0JCC0000241	CHIP INDUCTOR	1	
L4031	J0JCC0000241	CHIP INDUCTOR	1	
L4033	J0JHC0000078	CHIP INDUCTOR	1	
L4034	J0JHC0000078	CHIP INDUCTOR	1	
L4035	J0JGC0000021	CHIP INDUCTOR COIL	1	
L4037	G1C100KA0008	INDUCTOR COIL	1	
L4040	J0JCC0000241	CHIP INDUCTOR	1	
L4041	J0JCC0000241	CHIP INDUCTOR	1	
L4042	J0JCC0000241	CHIP INDUCTOR	1	
L4043	J0JCC0000241	CHIP INDUCTOR	1	
L4044	J0JCC0000241	CHIP INDUCTOR	1	
L4045	G1C100KA0009	INDUCTOR COIL	1	MELUK
L4046	J0JCC0000241	CHIP INDUCTOR	1	
L4047	J0JHC0000078	CHIP INDUCTOR	1	
L4054	J0JHC0000078	CHIP INDUCTOR	1	
L4055	ELJPA6R8MF	CHIP INDUCTOR	1	
L4056	J0JHC0000078	CHIP INDUCTOR	1	
L4057	G1C330K00017	INDUCTOR COIL	1	
L4059	J0JCC0000241	CHIP INDUCTOR	1	
L4060	J0JCC0000241	CHIP INDUCTOR	1	
L4061	J0JCC0000241	CHIP INDUCTOR	1	
L4062	G1C100K00020	INDUCTION COIL	1	
L4065	J0JCC0000241	CHIP INDUCTOR	1	
L4066	J0JCC0000241	CHIP INDUCTOR	1	
L4101	J0JGC0000021	CHIP INDUCTOR COIL	1	
L6800	J0JGC0000021	CHIP INDUCTOR COIL	1	
L6801	J0JGC0000021	CHIP INDUCTOR COIL	1	
PA801	ERBFE5R00U	FUSE	1	
Q201	UNR521900L	TRANSISTOR	1	
Q800	UNR221M00L	TRANSISTOR	1	
Q801	UNR221N00L	TRANSISTOR	1	
Q802	UNR521100L	TRANSISTOR	1	
Q803	B1DHDC000021	TRANSISTOR	1	
Q807	UNR521100L	TRANSISTOR	1	
Q808	UNR521100L	TRANSISTOR	1	
Q1102	2SC584500L	TRANSISTOR	1	
Q1104	2SC584500L	TRANSISTOR	1	
Q1105	2SC584500L	TRANSISTOR	1	
Q1106	2SC584500L	TRANSISTOR	1	
Q1108	2SC584500L	TRANSISTOR	1	
Q1109	2SC584500L	TRANSISTOR	1	
Q1110	UNR521100L	TRANSISTOR	1	
Q1113	UNR521100L	TRANSISTOR	1	
Q1114	UNR521100L	TRANSISTOR	1	
Q2006	2SD0601A0L	TRANSISTOR	1	
Q2007	2SD0601A0L	TRANSISTOR	1	
Q2008	2SB0709A0L	TRANSISTOR	1	
Q2009	2SD0601A0L	TRANSISTOR	1	
Q2010	2SB0709A0L	TRANSISTOR	1	
Q2100	2SD0601A0L	TRANSISTOR	1	
Q2101	2SD0601A0L	TRANSISTOR	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Q2102	2SD0601A0L	TRANSISTOR	1	
Q2103	2SD0601A0L	TRANSISTOR	1	
Q2104	2SD0601A0L	TRANSISTOR	1	
Q2200	2SD0601A0L	TRANSISTOR	1	
Q2201	2SD0601A0L	TRANSISTOR	1	
Q2202	2SD0601A0L	TRANSISTOR	1	
Q2501	UNR521100L	TRANSISTOR	1	
Q2502	UNR521100L	TRANSISTOR	1	
Q2507	UNR521100L	TRANSISTOR	1	
Q3001	2SD0601A0L	TRANSISTOR	1	
Q3002	2SD0601A0L	TRANSISTOR	1	
Q3003	UNR521100L	TRANSISTOR	1	
Q3004	UNR521100L	TRANSISTOR	1	
Q3005	UNR521100L	TRANSISTOR	1	
Q3006	2SB0709A0L	TRANSISTOR	1	
Q3007	2SB0709A0L	TRANSISTOR	1	
Q3008	UNR521100L	TRANSISTOR	1	
Q3009	UNR521100L	TRANSISTOR	1	
Q3010	UNR521100L	TRANSISTOR	1	
Q3019	2SD0601A0L	TRANSISTOR	1	
Q4016	2SA207700L	TRANSISTOR	1	
Q4017	2SA207700L	TRANSISTOR	1	
Q4018	2SA207700L	TRANSISTOR	1	
Q4023	2SC584500L	TRANSISTOR	1	
Q4024	2SC584500L	TRANSISTOR	1	
Q4025	2SC584500L	TRANSISTOR	1	
Q4026	2SC584500L	TRANSISTOR	1	
Q4027	2SC584500L	TRANSISTOR	1	
Q4028	2SC584500L	TRANSISTOR	1	
Q4030	2SA207700L	TRANSISTOR	1	
Q4031	2SA207700L	TRANSISTOR	1	
Q4032	2SA207700L	TRANSISTOR	1	
Q4037	2SC584500L	TRANSISTOR	1	
Q4038	2SC584500L	TRANSISTOR	1	
Q4039	2SC584500L	TRANSISTOR	1	
Q4045	2SC584500L	TRANSISTOR	1	
Q4046	2SC584500L	TRANSISTOR	1	
Q4050	2SD0601A0L	TRANSISTOR	1	
Q4067	2SA207700L	TRANSISTOR	1	
Q4069	2SA207700L	TRANSISTOR	1	
Q4073	2SD10300TL	TRANSISTOR	1	
Q4075	2SC584500L	TRANSISTOR	1	
Q4077	UNR521100L	TRANSISTOR	1	
Q4081	UNR221L00L	TRANSISTOR	1	MELUK
Q4086	2SA207700L	TRANSISTOR	1	
Q4087	2SA207700L	TRANSISTOR	1	
Q4088	UNR521100L	TRANSISTOR	1	
Q4089	UNR521100L	TRANSISTOR	1	
Q4091	2SA207700L	TRANSISTOR	1	
Q4092	B1GBBFJJ0001	TRANSISTOR	1	
Q4093	B1DHDC000021	TRANSISTOR	1	
Q4094	UNR511100L	TRANSISTOR	1	
Q4095	UNR521100L	TRANSISTOR	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R102	ERJ3GEYJ393V	M 39KOHM,J,1/16W	1	
R103	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R105	ERJ3GEYJ393V	M 39KOHM,J,1/16W	1	
R106	ERJ3GEYJ153V	M 15KOHM,J,1/16W	1	
R107	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R108	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R109	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R110	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R112	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R203	ERJ3GEYJ222V	M 2.2KOHM,J,1/16W	1	
R204	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R205	ERJ3GEYJ470V	M 47 OHM,J,1/16W	1	
R206	ERJ3GEYJ271V	M 270 OHM,J,1/16W	1	
R207	ERJ3GEYJ271V	M 270 OHM,J,1/16W	1	
R211	ERJ3GEYJ473V	M 47KOHM,J,1/16W	1	
R212	ERJ3GEYJ473V	M 47KOHM,J,1/16W	1	
R213	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R301	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R302	ERJ3EKF6801V	M 6.8KOHM, 1/16W	1	
R303	ERJ3EKF1202V	M 12KOHM, 1/16W	1	
R304	ERJ3EKF2202V	M 22KOHM, 1/16W	1	MELUK
R305	ERJ3EKF6802V	M 68KOHM, 1/16W	1	
R801	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R802	ERJ6ENF5601V	M 5.6KOHM, 1/10W	1	
R803	ERJ6ENF1001V	M 1KOHM, 1/10W	1	
R804	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R805	ERJ6ENF4701V	M 4.7KOHM, 1/10W	1	
R806	ERJ6ENF1001V	M 1KOHM, 1/10W	1	
R807	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R808	ERJ6ENF1691V	M1.69KOHM, 1/10W	1	
R809	ERJ6ENF1001V	M 1KOHM, 1/10W	1	
R810	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R811	ERJ6ENF4750V	M 560OHM, 1/10W	1	MELUK
R812	ERJ6ENF1001V	M 1KOHM, 1/10W	1	
R817	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R820	ERJ3GEYJ473V	M 47KOHM,J,1/16W	1	
R821	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R822	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R823	ERJ3GEYJ223V	M 22KOHM,J,1/16W	1	
R1017	ERJ3EKF2492V	M24.9KOHM, 1/16W	1	MELUK
R1018	ERJ3EKF2372V	M23.7KOHM, 1/16W	1	
R1106	ERJ3GEYJ683V	M 68KOHM,J,1/16W	1	
R1110	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R1117	ERJ3GEYJ104V	M 100KOHM,J,1/16W	1	
R1118	ERJ3GEYJ683V	M 68KOHM,J,1/16W	1	
R1122	EXB38V680JV	RESISTOR ARRAY	1	MELUK
R1123	EXB38V680JV	RESISTOR ARRAY	1	MELUK
R1124	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R1125	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R1126	EXB38V680JV	RESISTOR ARRAY	1	MELUK
R1129	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R1132	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R1133	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R1135	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R1137	ERJ3GEYJ225V	M 2.2MOHM,J,1/16W	1	
R1141	ERJ3GEYJ473V	M 47KOHM,J,1/16W	1	
R1142	ERJ3GEYJ223V	M 22KOHM,J,1/16W	1	
R1143	ERJ3GEYJ472V	M 4.7KOHM,J,1/16W	1	
R1144	EXB38V680JV	RESISTOR ARRAY	1	MELUK
R1146	ERJ3GEYJ273V	M 27KOHM,J,1/16W	1	
R1147	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R1148	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R1150	ERJ3GEYJ473V	M 47KOHM,J,1/16W	1	
R1152	EXB38V680JV	RESISTOR ARRAY	1	MELUK
R1153	ERJ3GEYJ220V	M 22 OHM,J,1/16W	1	
R1158	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R1159	ERJ3GEYJ391V	M 390 OHM,J,1/16W	1	
R1160	EXB38V680JV	RESISTOR ARRAY	1	MELUK
R1161	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R1162	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R1163	ERJ3GEYJ223V	M 22KOHM,J,1/16W	1	
R1164	ERJ3GEYJ471V	M 470 OHM,J,1/16W	1	
R1165	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R1166	EXB38V680JV	RESISTOR ARRAY	1	MELUK
R1167	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R1168	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R1169	EXB38V680JV	RESISTOR ARRAY	1	MELUK
R1170	ERJ3GEYJ104V	M 100KOHM,J,1/16W	1	
R1171	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R1172	ERJ3GEYJ104V	M 100KOHM,J,1/16W	1	
R1173	ERJ3GEYJ472V	M 4.7KOHM,J,1/16W	1	
R1174	EXB38V680JV	RESISTOR ARRAY	1	MELUK
R1175	ERJ3GEYJ224V	M 220KOHM,J,1/16W	1	
R1177	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	
R1178	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R1179	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R1180	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R1181	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R1182	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R1183	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R1184	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R1185	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R1187	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R1189	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R1190	ERJ3GEYJ560V	M 56 OHM,J,1/16W	1	
R1191	ERJ3GEYJ273V	M 27KOHM,J,1/16W	1	
R1192	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R1194	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R1199	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R1200	EXB38V680JV	RESISTOR ARRAY	1	MELUK
R1201	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R1202	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R1203	EXB38V680JV	RESISTOR ARRAY	1	MELUK
R1208	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R1210	ERJ3GEYJ472V	M 4.7KOHM,J,1/16W	1	
R1213	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R1214	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R1215	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R1224	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R1227	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R1231	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R1232	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R1233	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R1234	ERJ3GEYJ472V	M 4.7KOHM,J,1/16W	1	
R1236	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R1237	ERJ3GEYJ562V	M 5.6KOHM,J,1/16W	1	
R1239	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R1241	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R1243	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R1244	EXB38V103JV	RESISTOR ARRAY	1	MELUK
R1246	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R1253	ERJ3GEYJ562V	M 5.6KOHM,J,1/16W	1	
R1263	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R1266	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R1271	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R1273	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R1284	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R1285	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R1292	ERJ3GEYJ223V	M 22KOHM,J,1/16W	1	
R1293	ERJ3GEYJ223V	M 22KOHM,J,1/16W	1	
R1294	ERJ3GEYJ223V	M 22KOHM,J,1/16W	1	
R1295	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R1297	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R1298	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R1299	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R1300	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R1303	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R1308	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R1311	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R1312	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R1324	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R2012	ERJ3GEYJ104V	M 100KOHM,J,1/16W	1	
R2013	ERJ3GEYJ471V	M 470 OHM,J,1/16W	1	
R2014	ERJ3GEYJ152V	M 1.5KOHM,J,1/16W	1	
R2015	ERJ3GEYJ184V	M 180KOHM,J,1/16W	1	
R2016	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R2017	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R2018	ERJ3GEYJ104V	M 100KOHM,J,1/16W	1	
R2019	ERJ3GEYJ105V	M 1MOHM,J,1/16W	1	
R2020	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R2021	ERJ3GEYJ223V	M 22KOHM,J,1/16W	1	
R2022	ERJ3GEYJ473V	M 47KOHM,J,1/16W	1	
R2023	ERJ3GEYJ100V	M 10 OHM,J,1/16W	1	
R2100	ERJ12YJ1R5U	M 1.5OHM, J,1/2W	1	
R2101	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R2102	ERJ3GEYJ331V	M 330 OHM,J,1/16W	1	
R2104	ERJ3GEYJ332V	M 3.3KOHM,J,1/16W	1	
R2105	ERJ3GEYJ332V	M 3.3KOHM,J,1/16W	1	
R2106	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R2108	ERJ3GEYJ681V	M 680 OHM,J,1/16W	1	
R2109	ERJ3GEYJ471V	M 470 OHM,J,1/16W	1	
R2110	ERJ3GEYJ561V	M 560 OHM,J,1/16W	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R2112	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R2113	ERJ3GEYJ561V	M 560 OHM,J,1/16W	1	
R2115	ERJ12YJ1R5U	M 1.5OHM, J,1/2W	1	
R2116	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R2119	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R2120	ERJ3GEYJ330V	M 33 OHM,J,1/16W	1	
R2121	ERJ3GEYJ683V	M 68KOHM,J,1/16W	1	
R2122	ERJ3GEYJ563V	M 56KOHM,J,1/16W	1	
R2123	ERJ12YJ1R5U	M 1.5OHM, J,1/2W	1	
R2124	ERJ12YJ1R5U	M 1.5OHM, J,1/2W	1	
R2125	ERJ3GEYJ223V	M 22KOHM,J,1/16W	1	
R2126	ERJ3GEYJ472V	M 4.7KOHM,J,1/16W	1	
R2200	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R2204	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R2206	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R2207	ERJ3GEYJ471V	M 470 OHM,J,1/16W	1	
R2208	ERJ3GEYJ471V	M 470 OHM,J,1/16W	1	
R2209	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R2210	ERJ3GEYJ4R7V	M 4.7HM,J,1/16W	1	
R2211	ERJ3GEYJ4R7V	M 4.7HM,J,1/16W	1	
R2501	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R2502	ERJ3GEYJ471V	M 470 OHM,J,1/16W	1	
R2505	ERJ3GEYJ332V	M 3.3KOHM,J,1/16W	1	
R2507	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R2508	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R2511	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R2512	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R2513	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R2514	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R2515	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R2516	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R2517	ERJ3GEYJ242V	M 2.4KOHM,J,1/16W	1	
R2519	ERJ3GEYJ242V	M 2.4KOHM,J,1/16W	1	
R2521	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R2522	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R2523	ERJ3GEYJ123V	M 12KOHM,J,1/16W	1	
R2524	ERJ3GEYJ153V	M 15KOHM,J,1/16W	1	
R2529	ERJ3GEYJ104V	M 100KOHM,J,1/16W	1	
R2530	ERJ3GEYJ104V	M 100KOHM,J,1/16W	1	
R3003	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R3004	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R3005	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	
R3006	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	
R3007	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	
R3008	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R3009	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R3010	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R3012	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	
R3013	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	
R3014	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	
R3015	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R3016	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	
R3017	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R3018	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3019	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R3020	ERJ3GEYJ302V	M 3KOHM,J,1/16W	1	
R3021	ERJ3GEYJ182V	M 1.8KOHM,J,1/16W	1	
R3022	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R3023	ERJ3GEYJ750V	M 0.75HM, 1/16W	1	
R3024	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R3025	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R3026	ERJ3GEYJ302V	M 3KOHM,J,1/16W	1	
R3027	ERJ3GEYJ182V	M 1.8KOHM,J,1/16W	1	
R3028	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R3029	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R3030	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R3031	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R3032	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R3033	ERJ3GEYJ750V	M 0.75HM, 1/16W	1	
R3034	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R3035	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R3036	ERJ3GEYJ104V	M 100KOHM,J,1/16W	1	
R3037	ERJ3GEYJ104V	M 100KOHM,J,1/16W	1	
R3038	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R3039	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R3040	ERJ3EKF3301V	M 3.3KOHM, 1/16W	1	MELUK
R3041	ERJ3EKF3301V	M 3.3KOHM, 1/16W	1	MELUK
R3042	ERJ3GEYJ472V	M 4.7KOHM,J,1/16W	1	
R3043	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R3044	ERJ3GEYJ104V	M 100KOHM,J,1/16W	1	
R3045	ERJ3GEYJ273V	M 27KOHM,J,1/16W	1	
R3046	ERG1SJ821P	M 820 OHM, J, 1W	1	
R3047	ERJ3GEYJ273V	M 27KOHM,J,1/16W	1	
R3048	ERJ3GEYJ333V	M 33KOHM,J,1/16W	1	
R3049	ERJ3GEYJ333V	M 33KOHM,J,1/16W	1	
R3050	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R3051	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R3053	ERJ3GEYJ333V	M 33KOHM,J,1/16W	1	
R3054	ERJ3EKF75R0V	M 0.75HM, 1/16W	1	
R3055	ERJ3GEYJ333V	M 33KOHM,J,1/16W	1	
R3056	ERJ3EKF75R0V	M 0.75HM, 1/16W	1	
R3057	ERJ3EKF75R0V	M 0.75HM, 1/16W	1	
R3058	ERJ3EKF75R0V	M 0.75HM, 1/16W	1	
R3060	ERJ3EKF75R0V	M 0.75HM, 1/16W	1	
R3062	ERJ3EKF75R0V	M 0.75HM, 1/16W	1	
R3063	ERJ3EKF75R0V	M 0.75HM, 1/16W	1	
R3064	ERJ3GEYJ682V	M 6.8KOHM,J,1/16W	1	
R3066	ERJ3GEYJ472V	M 4.7KOHM,J,1/16W	1	
R3067	ERJ3GEYJ104V	M 100KOHM,J,1/16W	1	
R3068	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	
R3070	ERJ3GEYJ682V	M 6.8KOHM,J,1/16W	1	
R3071	ERJ3GEYJ104V	M 100KOHM,J,1/16W	1	
R3072	ERJ3GEYJ104V	M 100KOHM,J,1/16W	1	
R3075	ERJ3GEYJ472V	M 4.7KOHM,J,1/16W	1	
R3076	ERJ3GEYJ104V	M 100KOHM,J,1/16W	1	
R3077	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	
R3078	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	
R3079	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3080	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	
R3081	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	
R3082	ERJ3EKF75R0V	M 0.75HM, 1/16W	1	
R3083	ERJ3GEYJ184V	M 180KOHM,J,1/16W	1	
R3084	ERJ3GEYJ184V	M 180KOHM,J,1/16W	1	
R3086	ERJ3EKF75R0V	M 0.75HM, 1/16W	1	
R3087	ERJ3EKF75R0V	M 0.75HM, 1/16W	1	
R3092	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	
R3093	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	
R3094	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	
R3095	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R3096	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R3097	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R3112	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	
R3119	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R3120	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R4003	ERJ6GEYJ102V	M 1KOHM,J,1/10W	1	
R4004	ERJ6GEYJ102V	M 1KOHM,J,1/10W	1	
R4005	ERJ6GEYJ102V	M 1KOHM,J,1/10W	1	
R4040	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4041	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4042	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4053	ERJ3GEYJ153V	M 15KOHM,J,1/16W	1	
R4054	ERJ3GEYJ123V	M 12KOHM,J,1/16W	1	
R4055	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R4059	ERJ3GEYJ333V	M 33KOHM,J,1/16W	1	
R4060	ERJ3GEYJ202V	M 2KOHM,J,1/16W	1	
R4061	ERJ3GEYJ333V	M 33KOHM,J,1/16W	1	
R4062	ERJ3GEYJ331V	M 330 OHM,J,1/16W	1	
R4063	ERJ3GEYJ331V	M 330 OHM,J,1/16W	1	
R4064	ERJ3GEYJ331V	M 330 OHM,J,1/16W	1	
R4077	ERJ3GEYJ433V	M 43KOHM,J,1/16W	1	
R4078	ERJ3GEYJ153V	M 15KOHM,J,1/16W	1	
R4079	ERJ3GEYJ433V	M 43KOHM,J,1/16W	1	
R4080	ERJ3GEYJ153V	M 15KOHM,J,1/16W	1	
R4081	ERJ3GEYJ433V	M 43KOHM,J,1/16W	1	
R4082	ERJ3GEYJ153V	M 15KOHM,J,1/16W	1	
R4083	ERJ3GEYJ471V	M 470 OHM,J,1/16W	1	
R4084	ERJ3GEYJ471V	M 470 OHM,J,1/16W	1	
R4085	ERJ3GEYJ471V	M 470 OHM,J,1/16W	1	
R4089	ERJ3GEYJ331V	M 330 OHM,J,1/16W	1	
R4091	ERJ3GEYJ331V	M 330 OHM,J,1/16W	1	
R4093	ERJ3GEYJ331V	M 330 OHM,J,1/16W	1	
R4095	ERJ3GEYJ121V	M 120 OHM,J,1/16W	1	
R4096	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4097	ERJ3GEYJ272V	M 2.7KOHM,J,1/16W	1	
R4098	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4101	ERJ3GEYJ105V	M 1MOHM,J,1/16W	1	
R4102	ERJ6GEYJ331V	M 330 OHM,G,1/10W	1	
R4103	ERJ6GEYJ331V	M 330 OHM,G,1/10W	1	
R4104	ERJ6GEYJ331V	M 330 OHM,G,1/10W	1	
R4106	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R4107	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R4108	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R4109	ERJ3EKF2700V	M 270 OHM, 1/16W	1	
R4110	ERJ3EKF2700V	M 270 OHM, 1/16W	1	
R4111	ERJ3EKF2700V	M 270 OHM, 1/16W	1	
R4112	ERJ3GEYJ182V	M 1.8KOHM,J,1/16W	1	
R4117	ERJ3EKF2200V	M 220 OHM, 1/16W	1	MELUK
R4118	ERJ3EKF2200V	M 220 OHM, 1/16W	1	MELUK
R4119	ERJ3EKF2200V	M 220 OHM, 1/16W	1	MELUK
R4120	ERJ3GEYJ223V	M 22KOHM,J,1/16W	1	
R4122	ERJ3GEYJ223V	M 22KOHM,J,1/16W	1	
R4126	ERJ3GEYJ223V	M 22KOHM,J,1/16W	1	
R4127	ERJ3GEYJ223V	M 22KOHM,J,1/16W	1	
R4129	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R4130	ERJ6GEYJ681V	M 680 OHM,J,1/10W	1	
R4131	ERJ6GEYJ681V	M 680 OHM,J,1/10W	1	
R4132	ERJ6GEYJ681V	M 680 OHM,J,1/10W	1	
R4133	ERJ3EKF1020V	M 102 OHM, 1/16W	1	MELUK
R4134	ERJ3EKF1020V	M 102 OHM, 1/16W	1	MELUK
R4135	ERJ3EKF68R0V	M 68 OHM,J,1/16W	1	
R4136	ERJ3GEYJ220V	M 22 OHM,J,1/16W	1	
R4137	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R4140	ERJ3GEYJ220V	M 22 OHM,J,1/16W	1	
R4141	ERJ3GEYJ220V	M 22 OHM,J,1/16W	1	
R4142	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	
R4143	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	
R4144	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	
R4145	ERJ3EKF68R0V	M 68 OHM,J,1/16W	1	
R4146	ERJ3EKF68R0V	M 68 OHM,J,1/16W	1	
R4147	ERJ3EKF68R0V	M 68 OHM,J,1/16W	1	
R4149	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4151	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4152	ERJ3GEYJ220V	M 22 OHM,J,1/16W	1	
R4153	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4154	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4155	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4162	ERJ3GEYJ220V	M 22 OHM,J,1/16W	1	
R4163	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4164	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4165	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R4166	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	
R4167	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	
R4168	ERJ3GEYJ221V	M 220 OHM,J,1/16W	1	
R4169	ERJ3GEYJ562V	M 5.6KOHM,J,1/16W	1	
R4170	D1HG6808A002	NETWORK RESISTER	1	
R4171	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R4172	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4177	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4178	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4179	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R4180	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4181	D1HG6808A002	NETWORK RESISTER	1	
R4182	ERJ3GEYJ273V	M 27KOHM,J,1/16W	1	
R4186	ERJ3GEYJ273V	M 27KOHM,J,1/16W	1	
R4187	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4188	ERJ3EKF1020V	M 102 OHM, 1/16W	1	MELUK

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R4189	ERJ3EKF1020V	M 102 OHM, 1/16W	1	MELUK
R4191	ERJ3EKF82R0V	M 82 OHM,J,1/16W	1	MELUK
R4193	ERJ3GEYJ220V	M 22 OHM,J,1/16W	1	
R4195	ERJ3GEYJ220V	M 22 OHM,J,1/16W	1	
R4196	ERJ3GEYJ220V	M 22 OHM,J,1/16W	1	
R4198	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4200	ERJ3EKF68R0V	M 68 OHM,J,1/16W	1	
R4201	ERJ3EKF82R0V	M 82 OHM,J,1/16W	1	MELUK
R4202	ERJ3EKF68R0V	M 68 OHM,J,1/16W	1	
R4204	ERJ3GEYJ273V	M 27KOHM,J,1/16W	1	
R4206	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4207	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R4208	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R4209	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R4210	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R4212	ERJ3EKF68R0V	M 68 OHM,J,1/16W	1	
R4214	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R4215	ERJ3EKF68R0V	M 68 OHM,J,1/16W	1	
R4216	ERJ3EKF51R0V	M 51 OHM,J,1/16W	1	
R4217	ERJ3EKF1500V	M 150 OHM, 1/16W	1	
R4218	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4219	ERJ3EKF51R0V	M 51 OHM,J,1/16W	1	
R4222	ERJ3EKF1020V	M 102 OHM, 1/16W	1	MELUK
R4223	ERJ3GEYJ220V	M 22 OHM,J,1/16W	1	
R4224	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4231	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4237	ERJ3EKF68R0V	M 68 OHM,J,1/16W	1	
R4239	ERJ3EKF82R0V	M 82 OHM,J,1/16W	1	MELUK
R4240	ERJ3EKF51R0V	M 51 OHM,J,1/16W	1	
R4242	ERJ3EKF51R0V	M 51 OHM,J,1/16W	1	
R4243	ERJ3EKF1020V	M 102 OHM, 1/16W	1	MELUK
R4244	ERJ3EKF75R0V	M 0.75HM, 1/16W	1	
R4253	ERJ3GEYJ151V	M 150 OHM,J,1/16W	1	
R4258	ERJ3GEYJ151V	M 150 OHM,J,1/16W	1	
R4260	ERJ6GEYJ331V	M 330 OHM,G,1/10W	1	
R4265	ERJ6GEYJ331V	M 330 OHM,G,1/10W	1	
R4298	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4302	ERJ3EKF2870V	M 287 OHM, 1/16W	1	MELUK
R4306	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4310	ERJ3EKF4700V	M 470 OHM, 1/16W	1	
R4314	ERJ3EKF3601V	M 3.6KOHM, 1/16W	1	
R4318	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4319	ERJ3EKF5100V	M 510 OHM, 1/16W	1	
R4323	ERJ3EKF1331V	M 1.31KOHM, 1/16W	1	MELUK
R4324	ERJ6GEYJ821V	M 820 OHM,J,1/10W	1	
R4326	ERJ6GEYJ681V	M 680 OHM,J,1/10W	1	
R4330	ERJ3GEYJ330V	M 33 OHM,J,1/16W	1	
R4334	ERJ3GEYJ330V	M 33 OHM,J,1/16W	1	
R4338	ERJ6GEYJ331V	M 330 OHM,G,1/10W	1	
R4341	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4342	ERJ6GEYJ471V	M 470 OHM,J,1/10W	1	
R4344	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4345	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4347	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R4348	ERJ3EKF4700V	M 470 OHM, 1/16W	1	
R4349	ERJ6GEY0R00V	M 0 OHM,J,1/10W	1	
R4351	ERJ6GEY0R00V	M 0 OHM,J,1/10W	1	
R4355	ERJ3EKF1401V	M 1.4KOHM, 1/16W	1	MELUK
R4356	ERJ3EKF1401V	M 1.4KOHM, 1/16W	1	MELUK
R4357	ERJ3EKF1001V	M 1KOHM, 1/16W	1	
R4358	ERJ3EKF1001V	M 1KOHM, 1/16W	1	
R4359	ERJ3EKF33R0V	M 33 OHM,J,1/16W	1	MELUK
R4360	ERJ3EKF33R0V	M 33 OHM,J,1/16W	1	MELUK
R4361	ERJ3EKF33R0V	M 33 OHM,J,1/16W	1	MELUK
R4362	ERJ3EKF33R0V	M 33 OHM,J,1/16W	1	MELUK
R4363	ERJ3EKF33R0V	M 33 OHM,J,1/16W	1	MELUK
R4364	ERJ3EKF33R0V	M 33 OHM,J,1/16W	1	MELUK
R4365	ERJ3EKF2701V	M 2.7KOHM, 1/16W	1	MELUK
R4366	ERJ3EKF4700V	M 470 OHM, 1/16W	1	
R4367	ERJ3EKF2701V	M 2.7KOHM, 1/16W	1	MELUK
R4368	ERJ3EKF1500V	M 150 OHM, 1/16W	1	
R4369	ERJ3EKF1500V	M 150 OHM, 1/16W	1	
R4370	ERJ3EKF1500V	M 150 OHM, 1/16W	1	
R4373	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R4374	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R4383	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4384	ERJ3GEYJ331V	M 330 OHM,J,1/16W	1	
R4389	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4391	ERJ3GEYJ220V	M 22 OHM,J,1/16W	1	
R4392	ERJ3GEYJ471V	M 470 OHM,J,1/16W	1	
R4394	ERJ3GEYJ220V	M 22 OHM,J,1/16W	1	
R4400	EXB38V560JV	RESISTOR ARRAY	1	MELUK
R4402	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4403	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4405	EXB38V560JV	RESISTOR ARRAY	1	MELUK
R4409	EXB38V560JV	RESISTOR ARRAY	1	MELUK
R4411	ERJ3GEYJ560V	M 56 OHM,J,1/16W	1	
R4413	ERJ3GEYJ560V	M 56 OHM,J,1/16W	1	
R4414	ERJ3GEYJ560V	M 56 OHM,J,1/16W	1	
R4415	ERJ3GEYJ390V	M 39 OHM,J,1/16W	1	
R4417	ERJ3GEYJ390V	M 39 OHM,J,1/16W	1	
R4418	ERJ3GEYJ560V	M 56 OHM,J,1/16W	1	
R4419	ERJ3GEYJ560V	M 56 OHM,J,1/16W	1	
R4421	D1HG5608A002	NETWORK RESISTER	1	
R4425	D1HG5608A002	NETWORK RESISTER	1	
R4426	D1HG5608A002	NETWORK RESISTER	1	
R4427	ERJ3GEYJ220V	M 22 OHM,J,1/16W	1	
R4428	ERJ3GEYJ220V	M 22 OHM,J,1/16W	1	
R4429	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4430	ERJ3GEYJ470V	M 47 OHM,J,1/16W	1	
R4431	ERJ3GEYJ220V	M 22 OHM,J,1/16W	1	
R4432	D1HG6808A002	NETWORK RESISTER	1	
R4441	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R4442	ERJ3GEYJ220V	M 22 OHM,J,1/16W	1	
R4444	D1HG6808A002	NETWORK RESISTER	1	
R4447	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R4460	ERJ3GEYJ220V	M 22 OHM,J,1/16W	1	
R4461	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R4463	EXB38V680JV	RESISTOR ARRAY	1	MELUK
R4464	EXB38V680JV	RESISTOR ARRAY	1	MELUK
R4466	ERJ3GEYJ562V	M 5.6KOHM,J,1/16W	1	
R4470	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R4477	ERJ3GEYJ470V	M 47 OHM,J,1/16W	1	
R4478	ERJ3GEYJ470V	M 47 OHM,J,1/16W	1	
R4479	ERJ3GEYJ470V	M 47 OHM,J,1/16W	1	
R4481	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4485	ERJ3GEYJ103V	M 10KOHM,J,1/16W	1	
R4489	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4495	ERJ3GEYJ471V	M 470 OHM,J,1/16W	1	
R4496	ERJ3GEYJ222V	M 2.2KOHM,J,1/16W	1	
R4497	ERJ3EKF1101V	M 1.1KOHM, 1/16W	1	MELUK
R4498	ERJ3EKF2201V	M 2.2KOHM, 1/16W	1	MELUK
R4499	ERJ3EKF2701V	M 2.7KOHM, 1/16W	1	MELUK
R4500	ERJ3EKF75R0V	M 0.75HM, 1/16W	1	
R4501	ERJ3EKF75R0V	M 0.75HM, 1/16W	1	
R4502	ERJ3EKF6200V	M 620 OHM, 1/16W	1	MELUK
R4503	ERJ3EKF2201V	M 2.2KOHM, 1/16W	1	MELUK
R4504	ERJ3EKF1101V	M 1.1KOHM, 1/16W	1	MELUK
R4505	ERJ3EKF2201V	M 2.2KOHM, 1/16W	1	MELUK
R4506	ERJ3EKF75R0V	M 0.75HM, 1/16W	1	
R4507	ERJ3EKF75R0V	M 0.75HM, 1/16W	1	
R4508	ERJ3EKF2701V	M 2.7KOHM, 1/16W	1	MELUK
R4509	ERJ3EKF2701V	M 2.7KOHM, 1/16W	1	MELUK
R4510	ERJ3EKF2201V	M 2.2KOHM, 1/16W	1	MELUK
R4511	ERJ3EKF1101V	M 1.1KOHM, 1/16W	1	MELUK
R4512	ERJ3EKF1500V	M 150 OHM, 1/16W	1	
R4513	ERJ3GEYJ331V	M 330 OHM,J,1/16W	1	
R4516	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4517	ERJ3GEYJ821V	M 820 OHM,J,1/16W	1	
R4518	ERJ3GEYJ681V	M 680 OHM,J,1/16W	1	
R4519	ERJ3EKF1000V	M 100 OHM, 1/16W	1	MELUK
R4520	ERJ3GEYJ331V	M 330 OHM,J,1/16W	1	
R4521	ERJ3GEYJ560V	M 56 OHM,J,1/16W	1	
R4522	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4528	ERJ3GEYJ560V	M 56 OHM,J,1/16W	1	
R4529	ERJ3GEYJ471V	M 470 OHM,J,1/16W	1	
R4530	ERJ3GEYJ220V	M 22 OHM,J,1/16W	1	
R4531	ERJ3GEYJ560V	M 56 OHM,J,1/16W	1	
R4532	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R4533	D1HG6808A002	NETWORK RESISTER	1	
R4534	D1HG6808A002	NETWORK RESISTER	1	
R4535	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4536	D1HG6808A002	NETWORK RESISTER	1	
R4537	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4539	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4540	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4541	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4542	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4543	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4544	D1HG6808A002	NETWORK RESISTER	1	
R4545	D1HG6808A002	NETWORK RESISTER	1	
R4546	D1HG6808A002	NETWORK RESISTER	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R4547	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R4548	D1HG6808A002	NETWORK RESISTER	1	
R4549	D1HG6808A002	NETWORK RESISTER	1	
R4550	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4551	EXB38V680JV	RESISTOR ARRAY	1	MELUK
R4552	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4553	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4554	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4555	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R4556	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R4557	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R4558	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R4559	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R4560	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R4561	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R4562	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R4563	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R4564	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R4565	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4566	EXB38V680JV	RESISTOR ARRAY	1	MELUK
R4567	EXB38V680JV	RESISTOR ARRAY	1	MELUK
R4568	D1HG6808A002	NETWORK RESISTER	1	
R4569	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4570	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R4571	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R4572	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R4573	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4574	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4575	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4577	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R4578	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R4579	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R4580	ERJ3GEYJ680V	M 68 OHM,J,1/16W	1	
R4581	EXB38V680JV	RESISTOR ARRAY	1	MELUK
R4582	EXB38V680JV	RESISTOR ARRAY	1	MELUK
R4583	EXB38V680JV	RESISTOR ARRAY	1	MELUK
R4588	ERJ3GEYJ333V	M 33KOHM,J,1/16W	1	
R4589	ERJ3GEYJ563V	M 56KOHM,J,1/16W	1	
R4597	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4612	EXB38V560JV	RESISTOR ARRAY	1	MELUK
R4613	EXB38V560JV	RESISTOR ARRAY	1	MELUK
R4614	EXB38V560JV	RESISTOR ARRAY	1	MELUK
R4615	EXB38V560JV	RESISTOR ARRAY	1	MELUK
R4616	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R4617	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4618	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4620	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4720	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R4721	ERJ6GEYJ222V	M 2.2KOHM,J,1/10W	1	
R4722	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4724	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4737	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4739	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4740	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R4741	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4743	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4744	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4745	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4749	ERJ3GEYJ223V	M 22KOHM,J,1/16W	1	
R4750	ERJ3GEYJ223V	M 22KOHM,J,1/16W	1	
R4752	ERJ3GEYJ223V	M 22KOHM,J,1/16W	1	
R4753	ERJ3GEYJ102V	M 1KOHM,J,1/16W	1	
R4761	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4762	ERJ3GEYJ101V	M 100 OHM,J,1/16W	1	
R4785	ERJ3GEYJ220V	M 22 OHM,J,1/16W	1	
R4786	D1HG5608A002	NETWORK RESISTER	1	
R4787	ERJ3GEYJ220V	M 22 OHM,J,1/16W	1	
R4790	ERJ3GEYJ220V	M 22 OHM,J,1/16W	1	
R4791	ERJ3GEYJ220V	M 22 OHM,J,1/16W	1	
R4794	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
R4802	ERJ3GEY0R00V	M 0 OHM, 1/16W	1	
RM201	PNA4701M05TV	REMOCO RECEIVER	1	
RTL	TNPA3167AB	CIRCUIT BOARD DG	1	MELUK TX-22LX2F ⚠
RTL	TNPA3167AC	CIRCUIT BOARD DG	1	MELUK TX-22LX2P ⚠
RTL	TNPA3273AB	CIRCUIT BOARD B	1	MELUK ⚠
RTL	TNPA3274AA	CIRCUIT BOARD V	1	MELUK ⚠
RTL	TNPA3275AA	CIRCUIT BOARD K	1	MELUK ⚠
RTL	TNPH0582AB	CIRCUIT BOARD A	1	MELUK ⚠
SW301	EVQPC105K	SWITCH	1	⚠
SW302	EVQPC105K	SWITCH	1	
SW303	EVQPC105K	SWITCH	1	
SW304	EVQPC105K	SWITCH	1	
SW305	EVQPC105K	SWITCH	1	
SW310	K0ADZA000002	SWITCH	1	MELUK
TU101	ENG29529GF	TUNER	1	MELUK ⚠
V1	K1KA09B00019	9P CONNECTOR	1	MELUK
X1101	H0J600400006	CRYSTAL	1	
X2101	EFCT7004BF	CERAMIC FILTER	1	
X2102	EFCT6504BF	CERAMIC FILTER	1	
X2501	H0J184500020	CRYSTAL	1	
X4101	H0J202500002	CRYSTAL	1	
ZA4006	TESA169	SHIELD CLIP	1	
ZA4007	TESA169	SHIELD CLIP	1	
ZA4008	TESA169	SHIELD CLIP	1	
ZA4009	TESA169	SHIELD CLIP	1	
ZA4010	TESA169	SHIELD CLIP	1	
ZA4011	TESA169	SHIELD CLIP	1	
ZA4012	TESA169	SHIELD CLIP	1	
ZA4013	TESA169	SHIELD CLIP	1	
ZA4014	TESA169	SHIELD CLIP	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
ZA4015	TESA169	SHIELD CLIP	1	
ZA4016	TESA169	SHIELD CLIP	1	
ZA4017	TESA169	SHIELD CLIP	1	
ZA4018	TESA169	SHIELD CLIP	1	
ZA4019	TESA169	SHIELD CLIP	1	

14. Schematic Diagram for printing with A4

15. Cover for printing with A4

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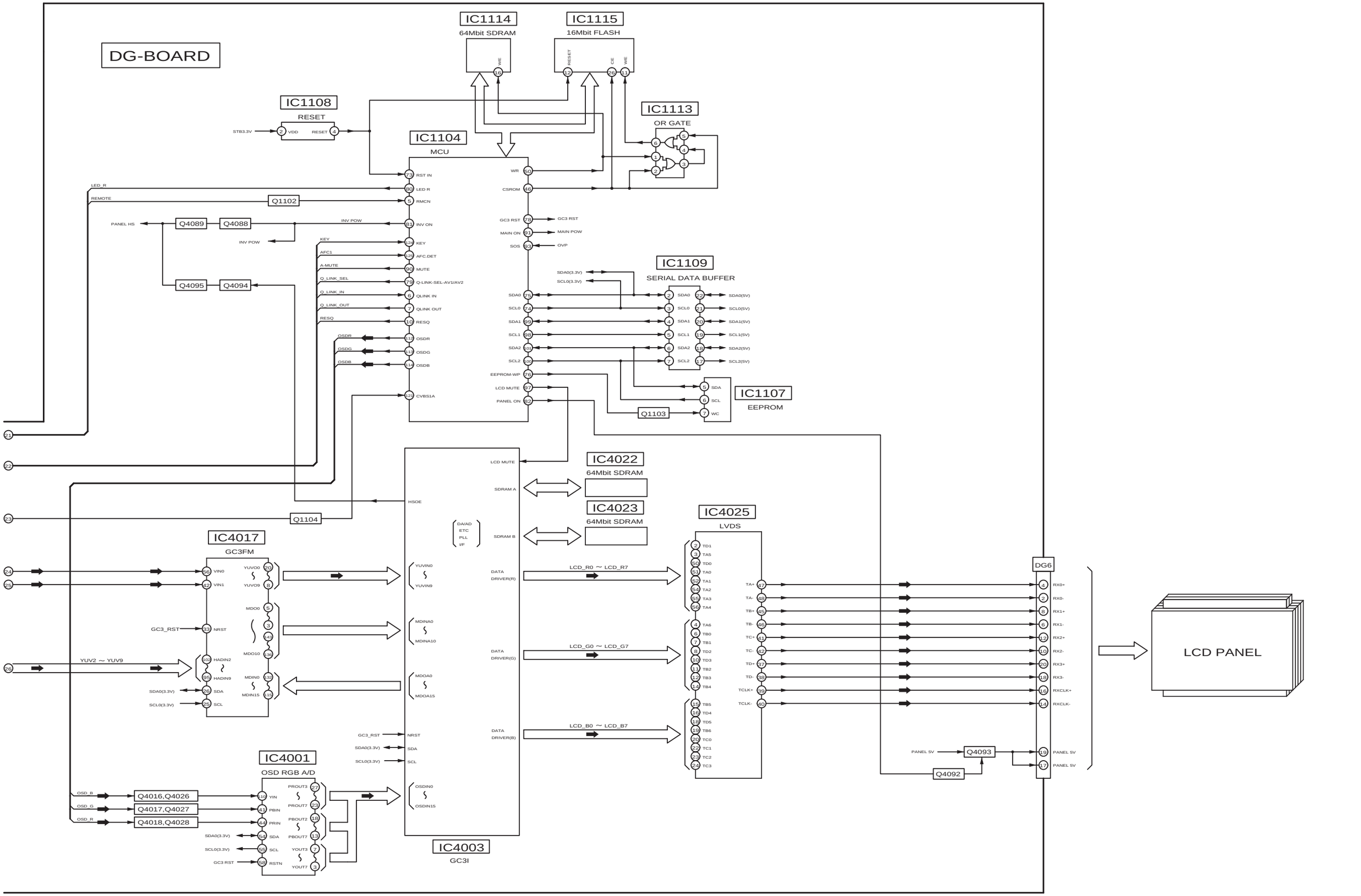
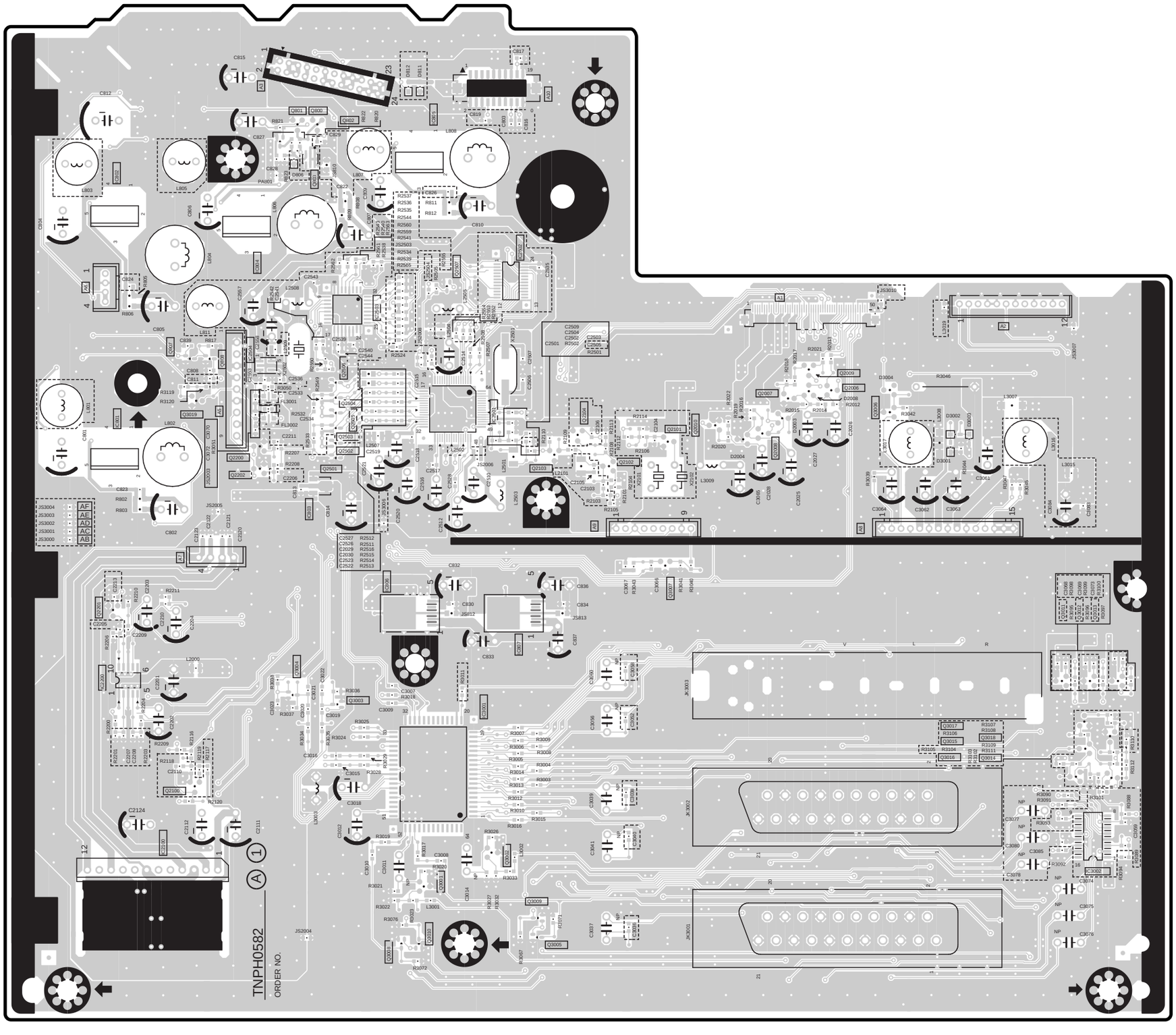


TX-22LX2F/P
Signal Block Diagram

TX-22LX2F/P
Signal Block Diagram

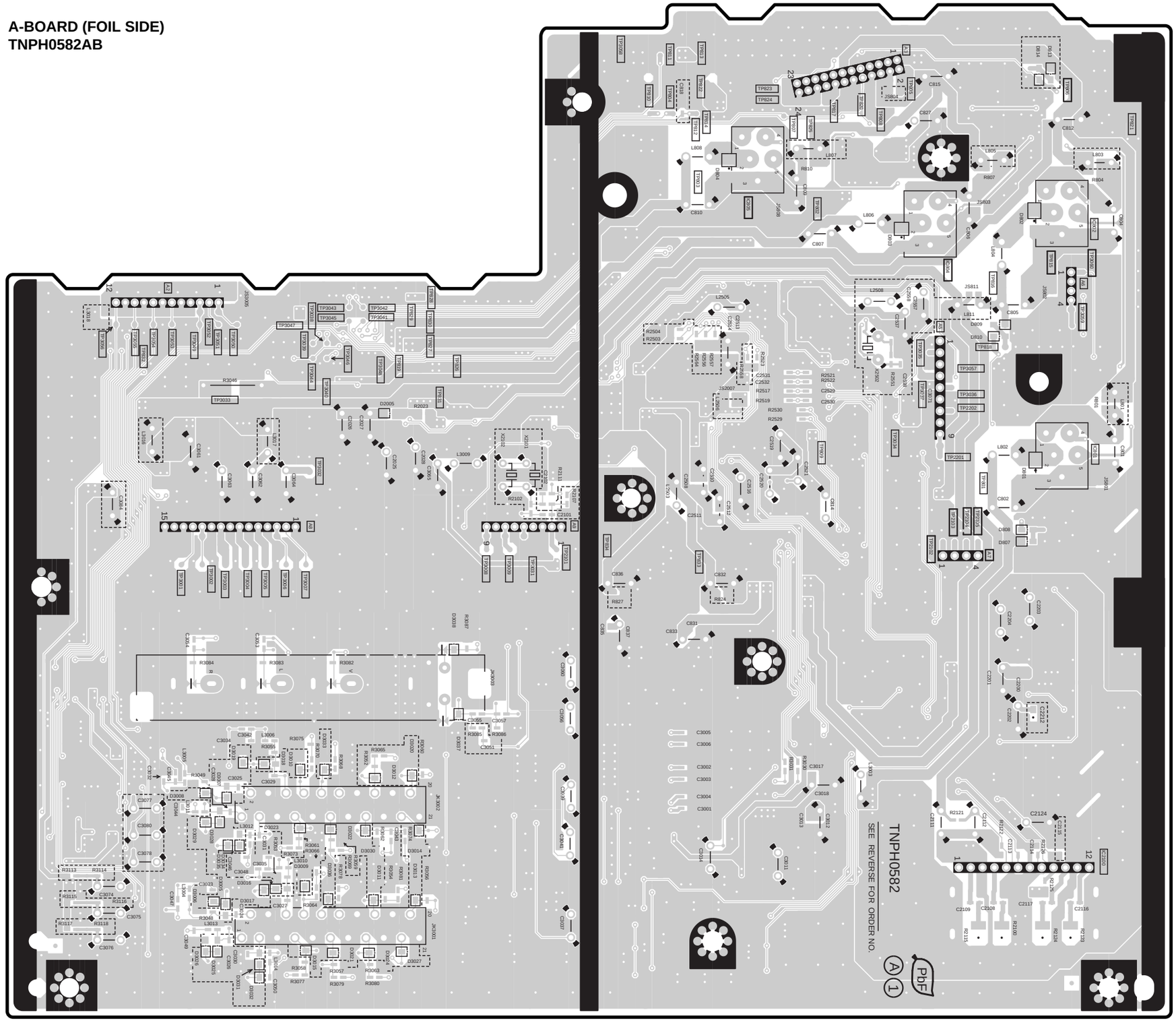
A-BOARD (COMPONENT SIDE)
TNPH0582AB



TX-22LX2F/P
A-BOARD TNPH0582AB

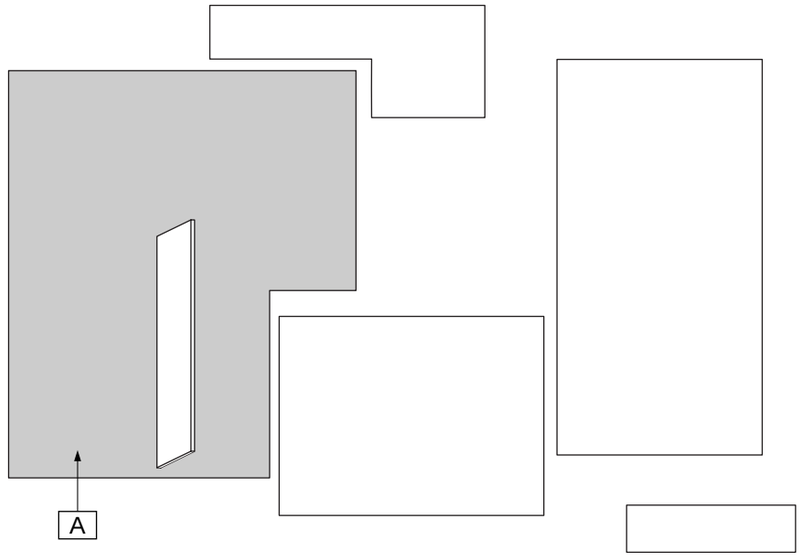
TX-22LX2F/P
A-BOARD TNPH0582AB

A-BOARD (FOIL SIDE)
TNPH0582AB



TX-22LX2F/P
A-BOARD TNPH0582AB

TX-22LX2F/P
A-BOARD TNPH0582AB



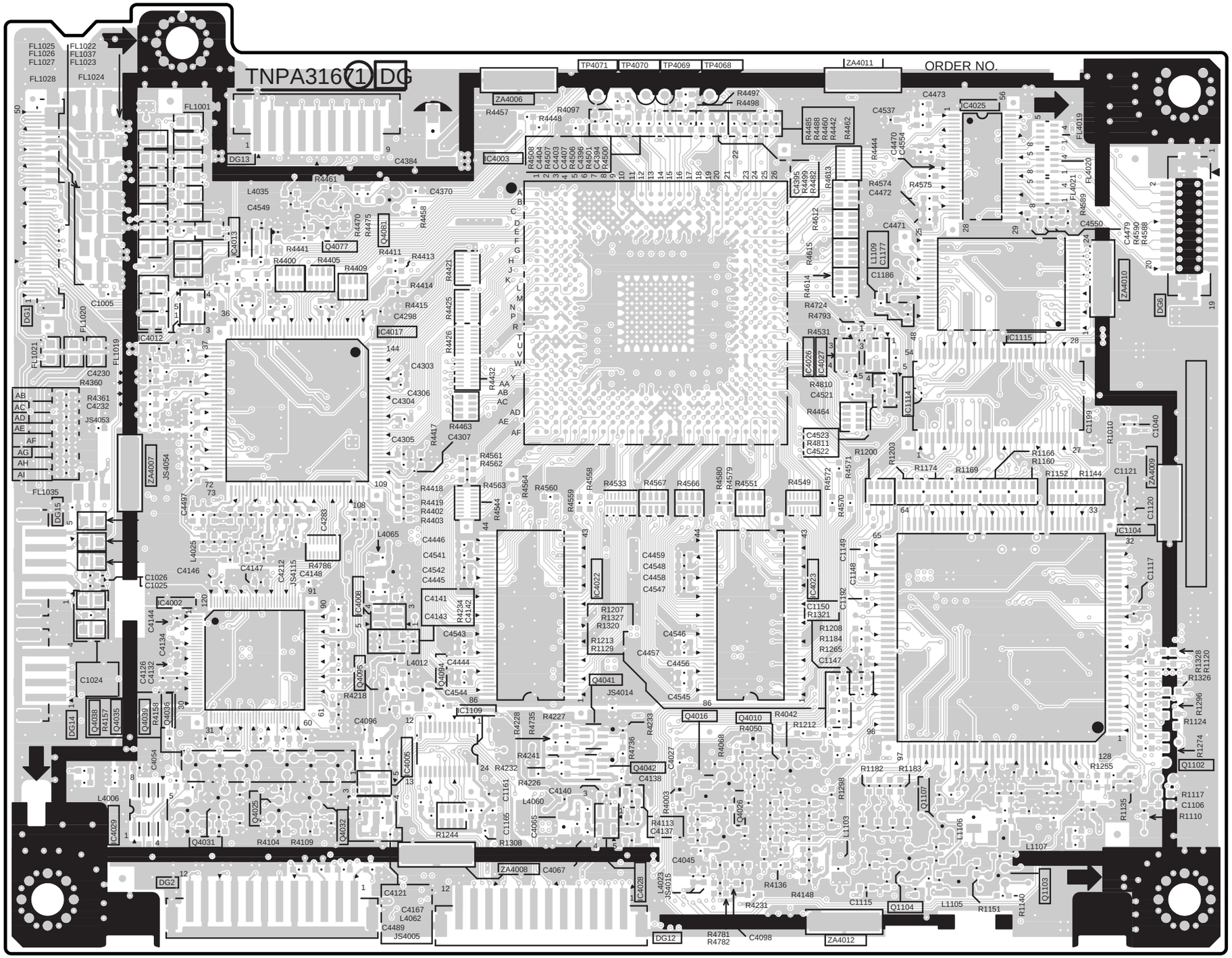
Parts Location

A-BOARD (FOIL SIDE)					
IC		**TP**		TP3001	B-3
IC801	G-4	TP801	G-4	TP3002	C-3
IC802	G-5	TP802	F-5	TP3003	C-3
IC804	F-5	TP803	E-5	TP3004	C-3
IC805	F-5	TP804	E-6	TP3005	C-3
		TP805	F-6	TP3006	C-3
		TP806	G-6	TP3007	C-3
		TP807	F-6	TP3008	D-3
		TP808	F-6	TP3009	D-3
		TP809	F-4	TP3031	D-3
		TP810	E-6	TP3032	B-4
		TP811	E-6	TP3033	B-4
		TP812	E-6	TP3034	F-4
		TP813	E-6	TP3035	F-4
		TP814	E-6	TP3036	G-4
		TP815	G-5	TP3037	F-4
		TP816	G-5	TP3038	C-4
		TP817	F-6	TP3039	C-4
		TP818	G-4	TP3040	C-4
		TP819	D-4	TP3041	C-5
		TP820	F-6	TP3042	C-5
		TP821	H-6	TP3043	C-5
		TP822	E-6	TP3044	C-4
		TP823	F-6	TP3045	C-5
		TP824	F-6	TP3046	C-4
		TP825	F-6	TP3047	C-4
		TP826	D-4	TP3048	C-4
		TP827	D-4	TP3049	B-4
		TP828	D-5	TP3050	C-4
		TP829	D-5	TP3051	C-4
		TP830	D-5	TP3052	C-4
		TP831	D-4	TP3053	B-4
		TP833	E-3	TP3054	B-4
		TP834	E-3	TP3055	B-4
		TP2101	D-3	TP3056	B-4
		TP2102	G-3	TP3057	G-4
		TP2103	G-3	TP3058	E-6
		TP2104	G-3	TP3059	G-5
		TP2105	G-3	TP3060	G-5
		TP2201	G-4		
		TP2202	G-4		

Parts Location

A-BOARD (COMPONENT SIDE)					
IC		**TRANSISTOR**		Q3014	G-2
IC801	B-4	Q800	C-6	Q3015	G-2
IC802	B-5	Q801	C-6	Q3016	G-2
IC803	C-4	Q802	C-5	Q3017	G-2
IC804	C-5	Q803	C-5	Q3018	G-2
IC805	D-5	Q807	B-4	Q3019	C-4
IC806	D-3	Q808	C-4		
IC807	D-3	Q2006	F-4		
IC2100	B-2	Q2007	F-4		
IC2200	B-3	Q2008	F-4		
IC2501	D-4	Q2009	F-4		
IC2502	D-5	Q2010	E-4		
IC2503	C-5	Q2100	B-2		
IC2504	C-4	Q2101	E-4		
IC3001	D-2	Q2102	E-4		
IC3002	G-2	Q2103	D-4		
		Q2104	E-4		
		Q2200	C-4		
		Q2201	B-3		
		Q2202	C-4		
		Q2501	C-4		
		Q2502	C-4		
		Q2503	C-4		
		Q2504	C-4		
		Q2505	C-4		
		Q2506	C-4		
		Q2507	D-5		
		Q3001	D-2		
		Q3002	D-2		
		Q3003	C-3		
		Q3004	C-3		
		Q3005	D-1		
		Q3006	F-4		
		Q3007	E-3		
		Q3008	D-1		
		Q3009	D-1		
		Q3010	D-1		
		Q3011	G-3		
		Q3012	G-3		
		Q3013	G-3		

DG-BOARD (COMPONENT SIDE)
TNPA3167AB (TX-22LX2F)
TNPA3167AC (TX-22LX2P)



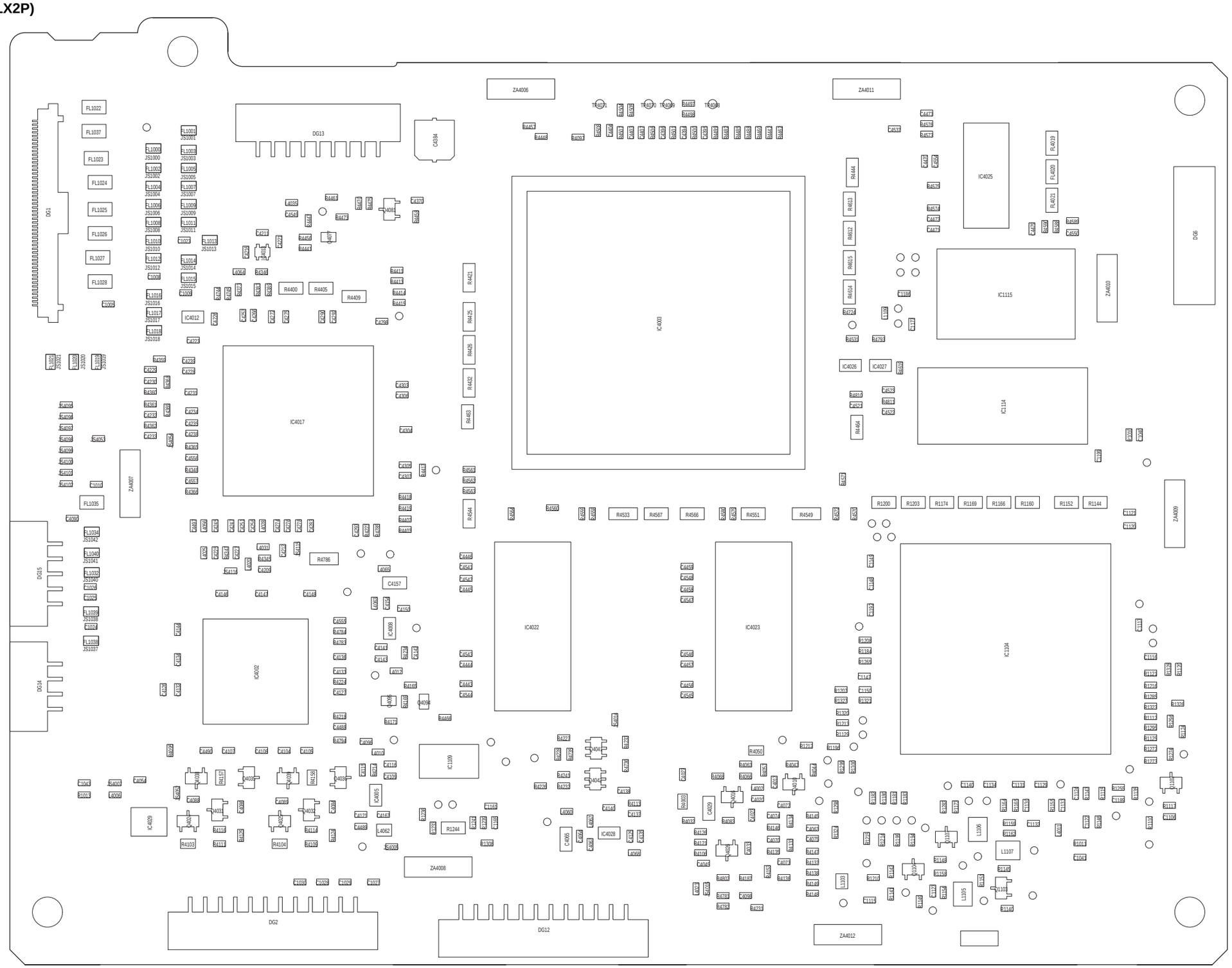
TX-22LX2F
DG-BOARD TNPA3167AB

TX-22LX2P
DG-BOARD TNPA3167AC

TX-22LX2F
DG-BOARD TNPA3167AB

TX-22LX2P
DG-BOARD TNPA3167AC

DG-BOARD (COMPONENT SIDE)
TNPA3167AB (TX-22LX2F)
TNPA3167AC (TX-22LX2P)



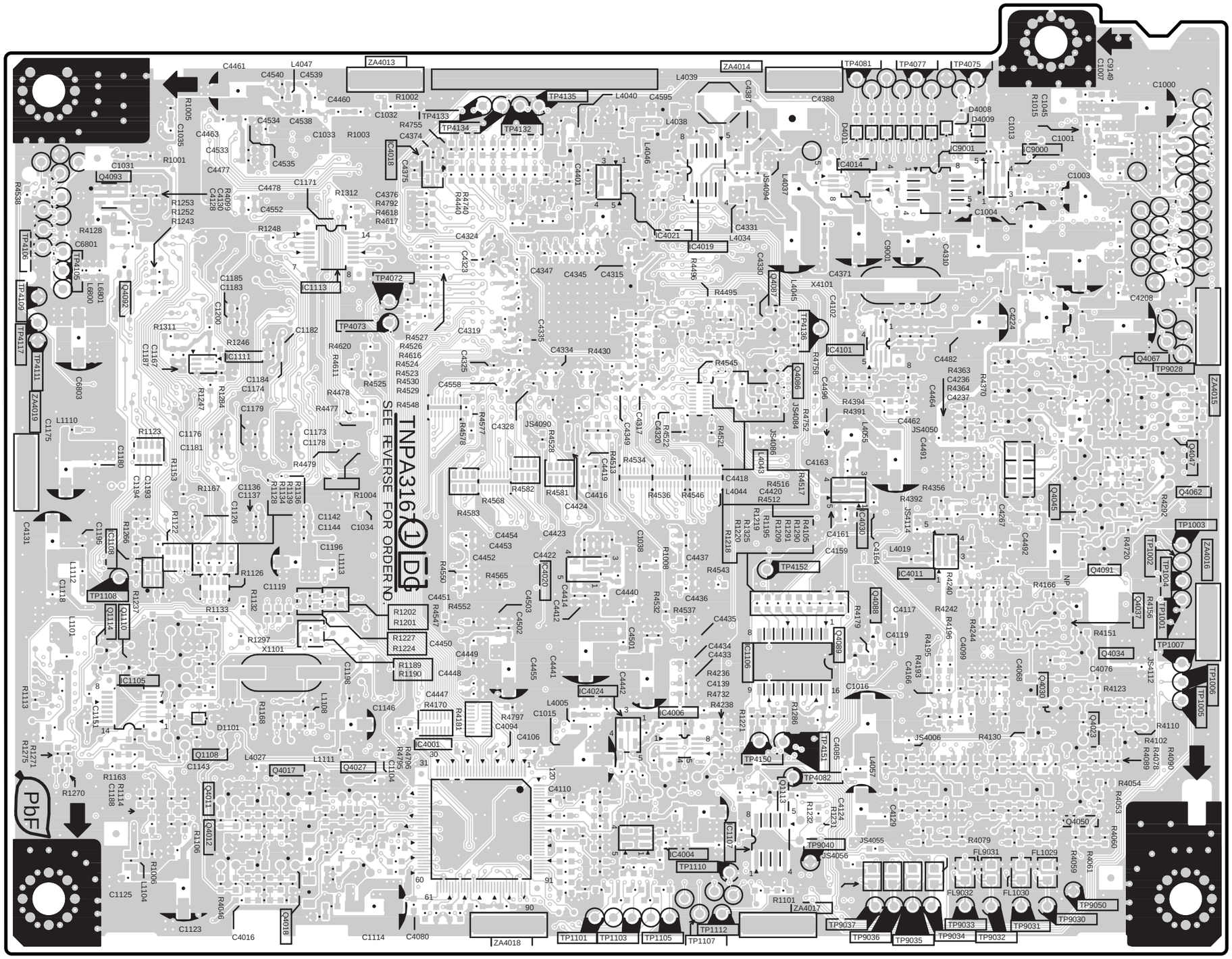
TX-22LX2F
DG-BOARD TNPA3167AB

TX-22LX2P
DG-BOARD TNPA3167AC

TX-22LX2F
DG-BOARD TNPA3167AB

TX-22LX2P
DG-BOARD TNPA3167AC

DG-BOARD (FOIL SIDE)
TNPA3167AB (TX-22LX2F)
TNPA3167AC (TX-22LX2P)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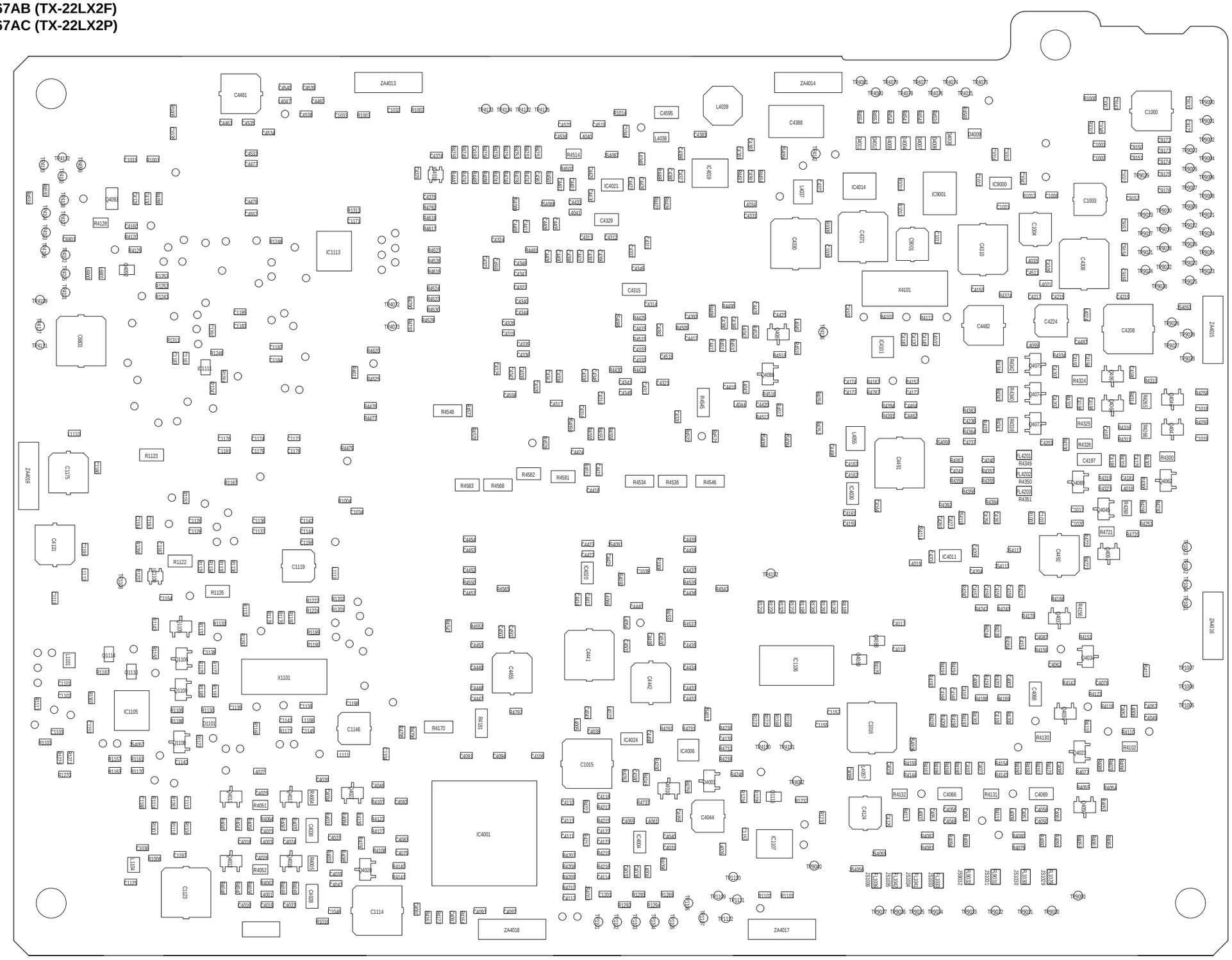
DG-BOARD (FOIL SIDE)
TNPA3167AB (TX-22LX2F)
TNPA3167AC (TX-22LX2P)

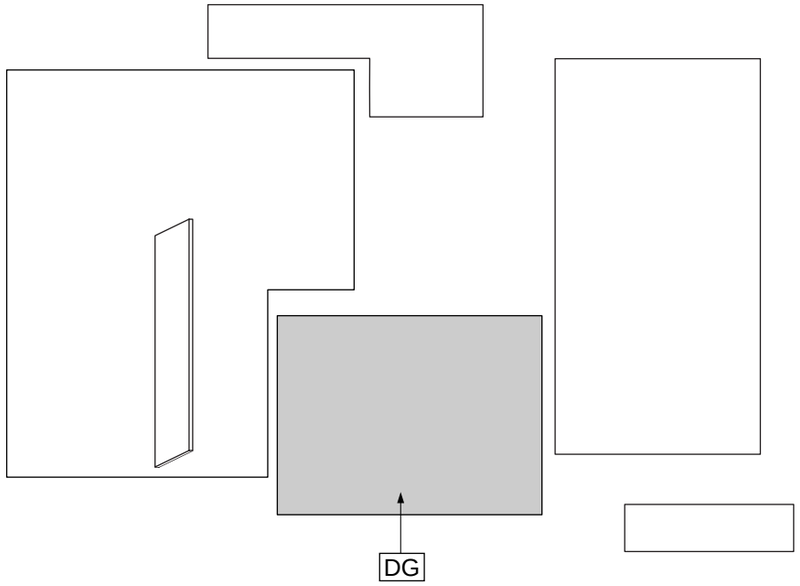


TX-22LX2F
DG-BOARD TNPA3167AB

TX-22LX2P
DG-BOARD TNPA3167AC

TX-22LX2F
DG-BOARD TNPA3167AB

TX-22LX2P
DG-BOARD TNPA3167AC



Parts Location

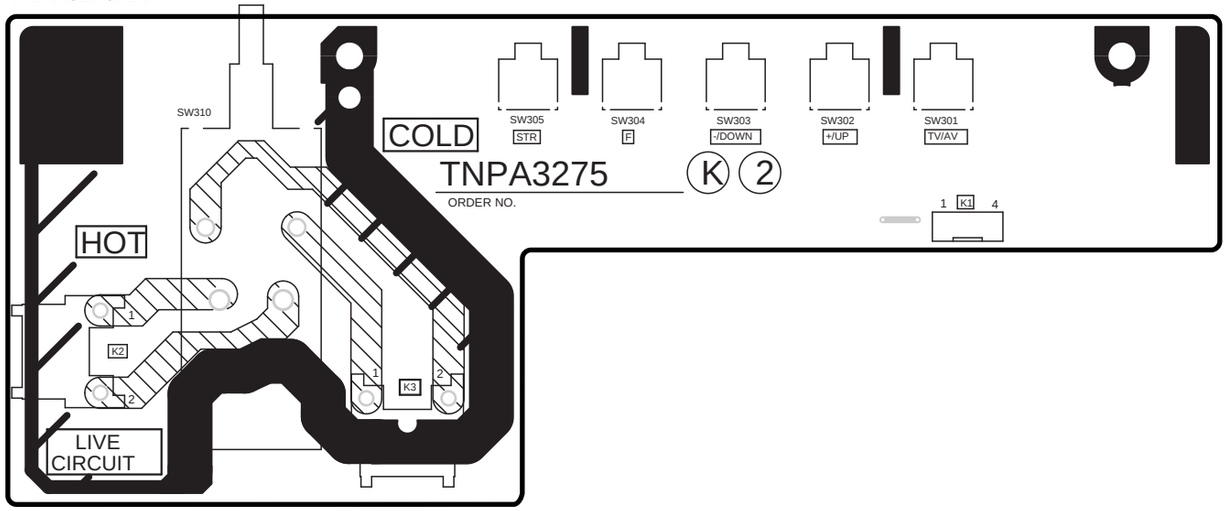
DG-BOARD (FOIL SIDE)					
IC		**TRANSISTOR**		**TP**	
IC1105	B-2	Q1105	B-3	TP1001	G-3
IC1106	E-2	Q1106	B-2	TP1003	G-3
IC1107	E-1	Q1108	B-2	TP1005	G-2
IC1108	B-3	Q1109	B-2	TP1006	G-2
IC1111	B-4	Q1110	B-2	TP1007	G-2
IC1113	C-5	Q1113	E-2	TP1101	D-1
IC4001	C-2	Q1114	B-3	TP1103	D-1
IC4004	D-1	Q4011	B-2	TP1105	D-1
IC4006	E-2	Q4012	B-1	TP1107	E-1
IC4011	F-3	Q4017	B-2	TP1108	B-3
IC4014	F-5	Q4018	B-2	TP1110	E-1
IC4018	C-5	Q4023	G-2	TP1112	E-1
IC4019	E-5	Q4027	C-2	TP4072	C-4
IC4020	D-3	Q4028	C-1	TP4073	C-4
IC4021	D-5	Q4030	G-2	TP4082	E-2
IC4024	D-2	Q4034	G-2	TP4105	A-5
IC4030	E-3	Q4037	G-3	TP4106	A-5
IC4101	F-4	Q4045	G-3	TP4109	A-4
IC9000	F-5	Q4046	G-4	TP4111	A-4
IC9001	F-5	Q4047	G-4	TP4117	A-4
		Q4050	G-2	TP4132	D-5
		Q4062	G-3	TP4133	D-5
		Q4067	G-4	TP4134	D-5
		Q4068	G-4	TP4135	D-5
		Q4069	G-3	TP4136	E-4
		Q4073	F-4	TP4150	E-2
		Q4074	F-4	TP4151	E-2
		Q4075	F-4	TP4152	E-3
		Q4086	E-4	TP9028	G-4
		Q4087	E-4	TP9030	G-1
		Q4088	F-3	TP9031	F-1
		Q4089	E-2	TP9032	F-1
		Q4091	G-3	TP9033	F-1
		Q4092	B-5	TP9034	F-1
		Q4093	B-5	TP9035	F-1
				TP9036	F-1
				TP9037	F-1
				TP9040	E-1
				TP9050	G-1

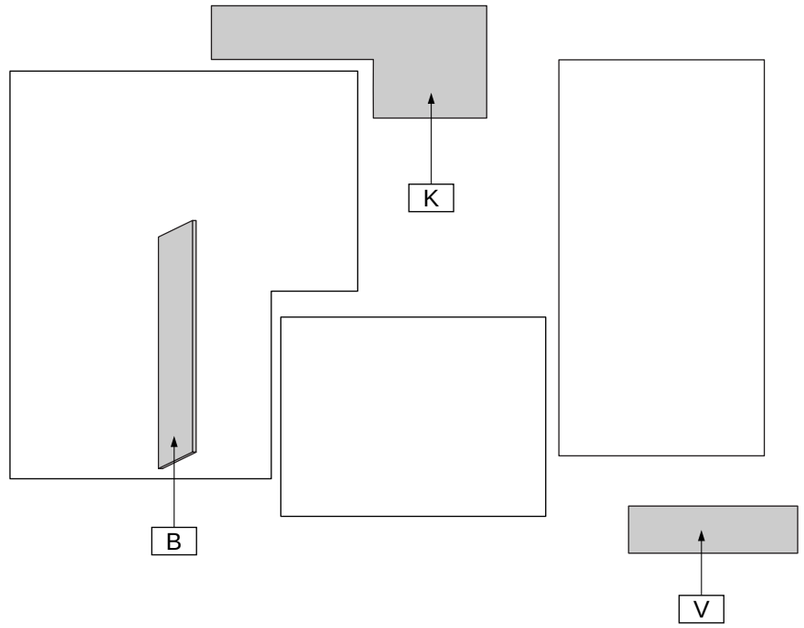
Parts Location

DG-BOARD (COMPONENT SIDE)					
IC		**TRANSISTOR**		**TP**	
IC1104	F-3	Q1102	G-2	TP4068	E-5
IC1109	C-2	Q1103	F-1	TP4069	D-5
IC1114	F-4	Q1104	F-1	TP4070	D-5
IC1115	F-4	Q1107	F-2	TP4071	D-5
IC4002	B-2	Q4010	E-2		
IC4003	D-4	Q4016	E-2		
IC4005	C-2	Q4024	B-2		
IC4008	C-3	Q4025	B-2		
IC4012	B-4	Q4026	E-2		
IC4013	B-5	Q4031	B-2		
IC4017	C-4	Q4032	C-2		
IC4022	D-3	Q4035	B-2		
IC4023	E-3	Q4036	C-2		
IC4025	F-5	Q4038	B-2		
IC4026	F-4	Q4039	B-2		
IC4027	F-4	Q4041	D-2		
IC4028	D-2	Q4042	D-2		
IC4029	B-2	Q4077	C-5		
		Q4081	C-5		
		Q4094	C-2		
		Q4095	C-2		

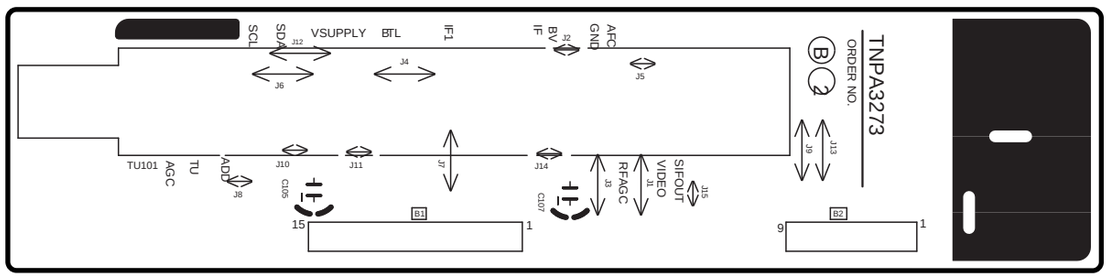
TX-22LX2F/P
DG-BOARD PARTS LOCATION

K-BOARD (COMPONENT SIDE)
TNPA3275AA

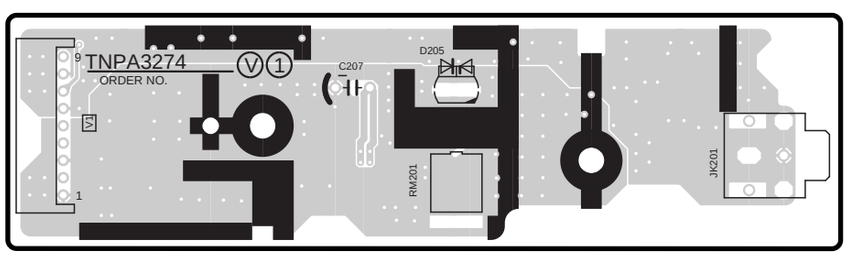




B-BOARD (COMPONENT SIDE)
TNPA3273AB



V-BOARD (COMPONENT SIDE)
TNPA3274AA



TX-22LX2F/P
K-BOARD TNPA3275AA

TX-22LX2F/P
B-BOARD TNPA3273AB

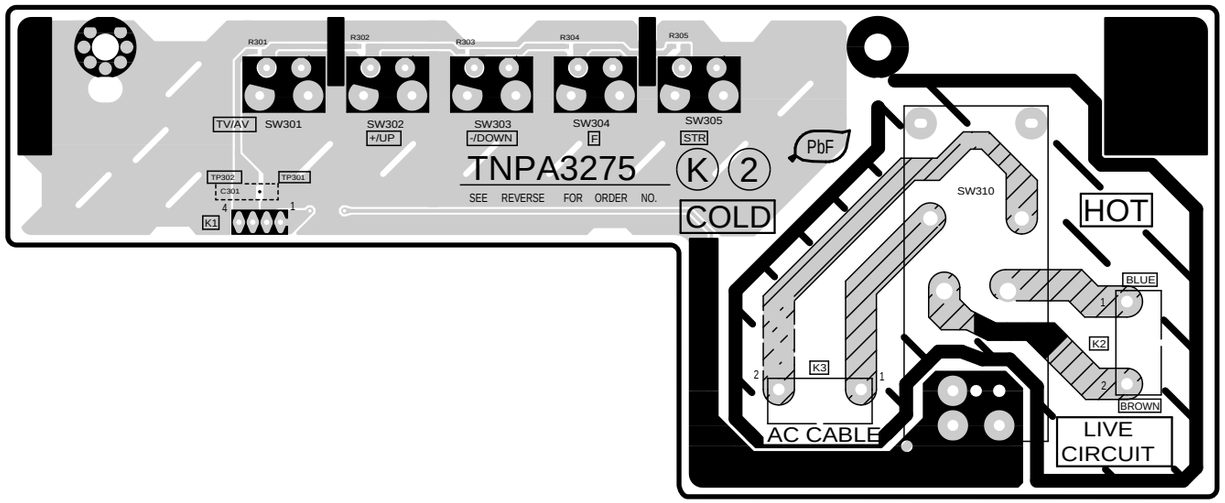
TX-22LX2F/P
V-BOARD TNPA3274AA

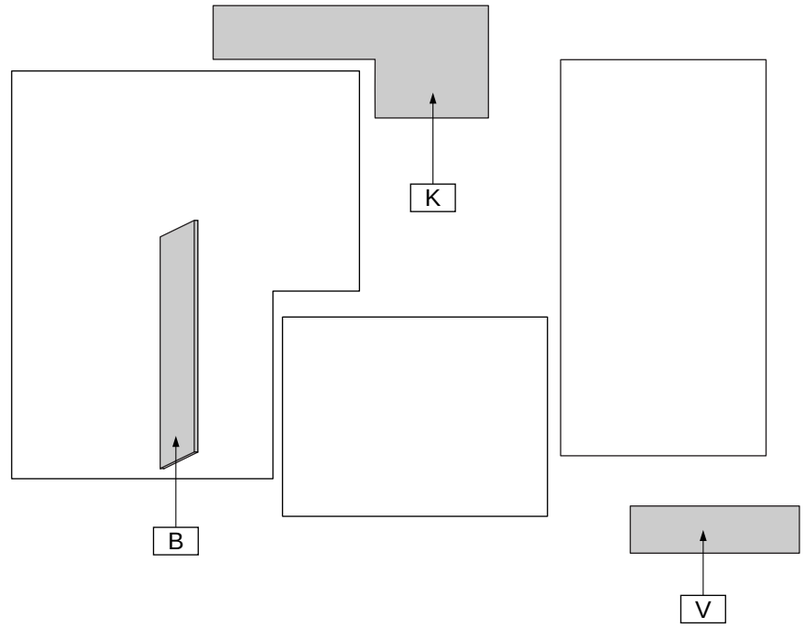
TX-22LX2F/P
K-BOARD TNPA3275AA

TX-22LX2F/P
B-BOARD TNPA3273AB

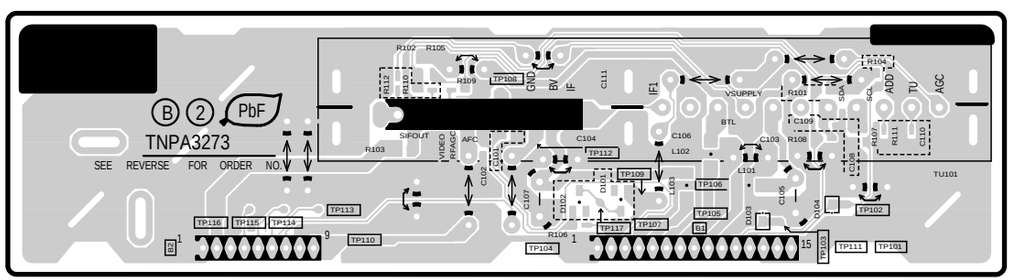
TX-22LX2F/P
V-BOARD TNPA3274AA

K-BOARD (FOIL SIDE)
TNPA3275AA

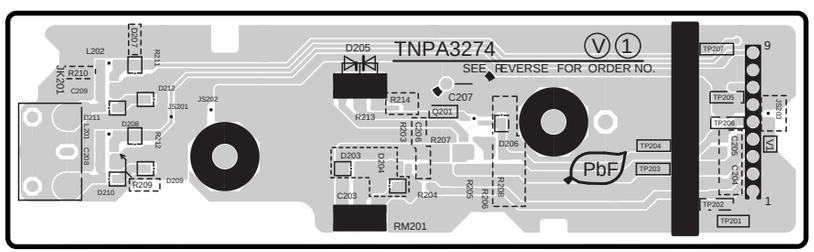




B-BOARD (FOIL SIDE)
TNPA3273AB



V-BOARD (FOIL SIDE)
TNPA3274AA



TX-22LX2F/P
K-BOARD TNPA3275AA

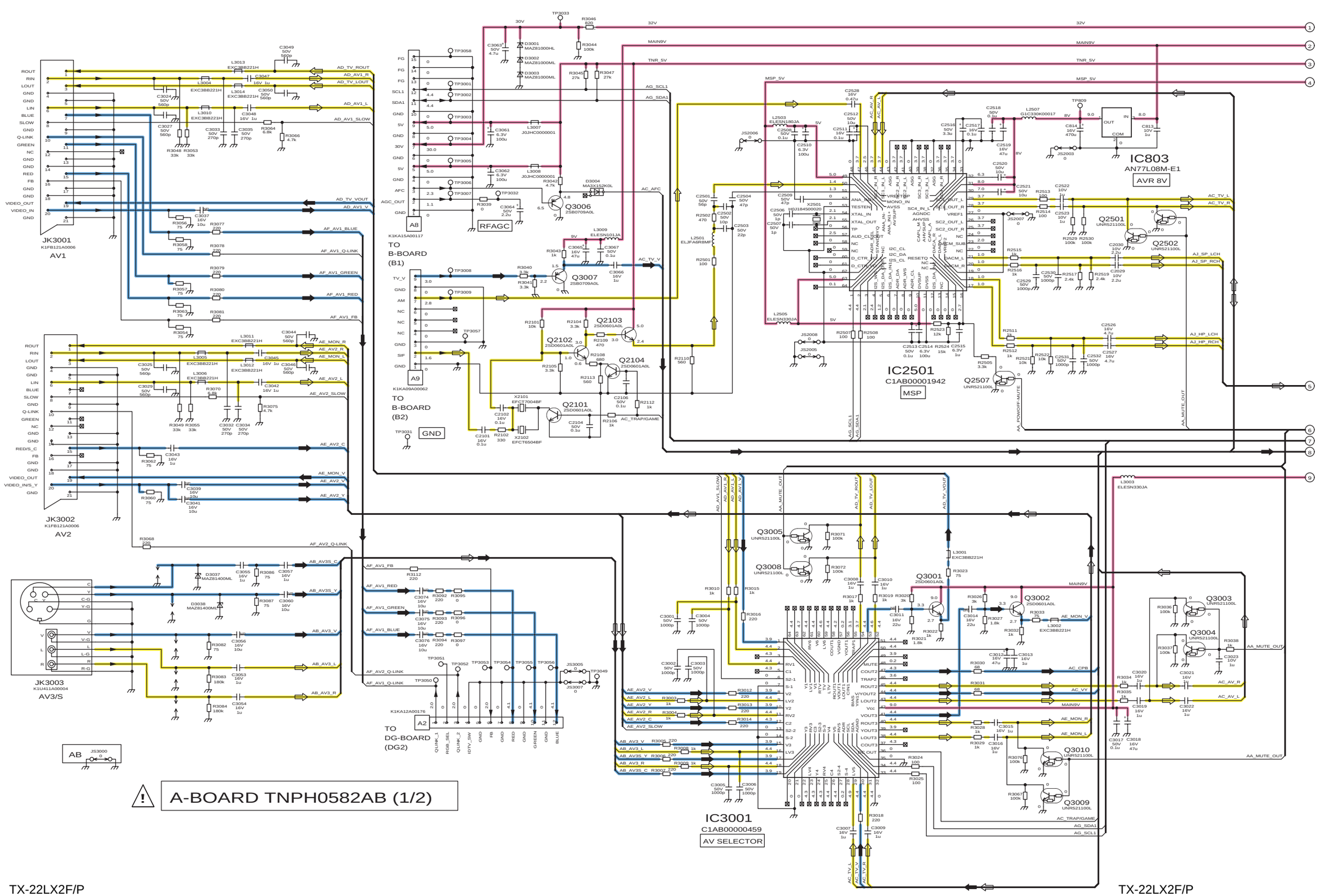
TX-22LX2F/P
B-BOARD TNPA3273AB

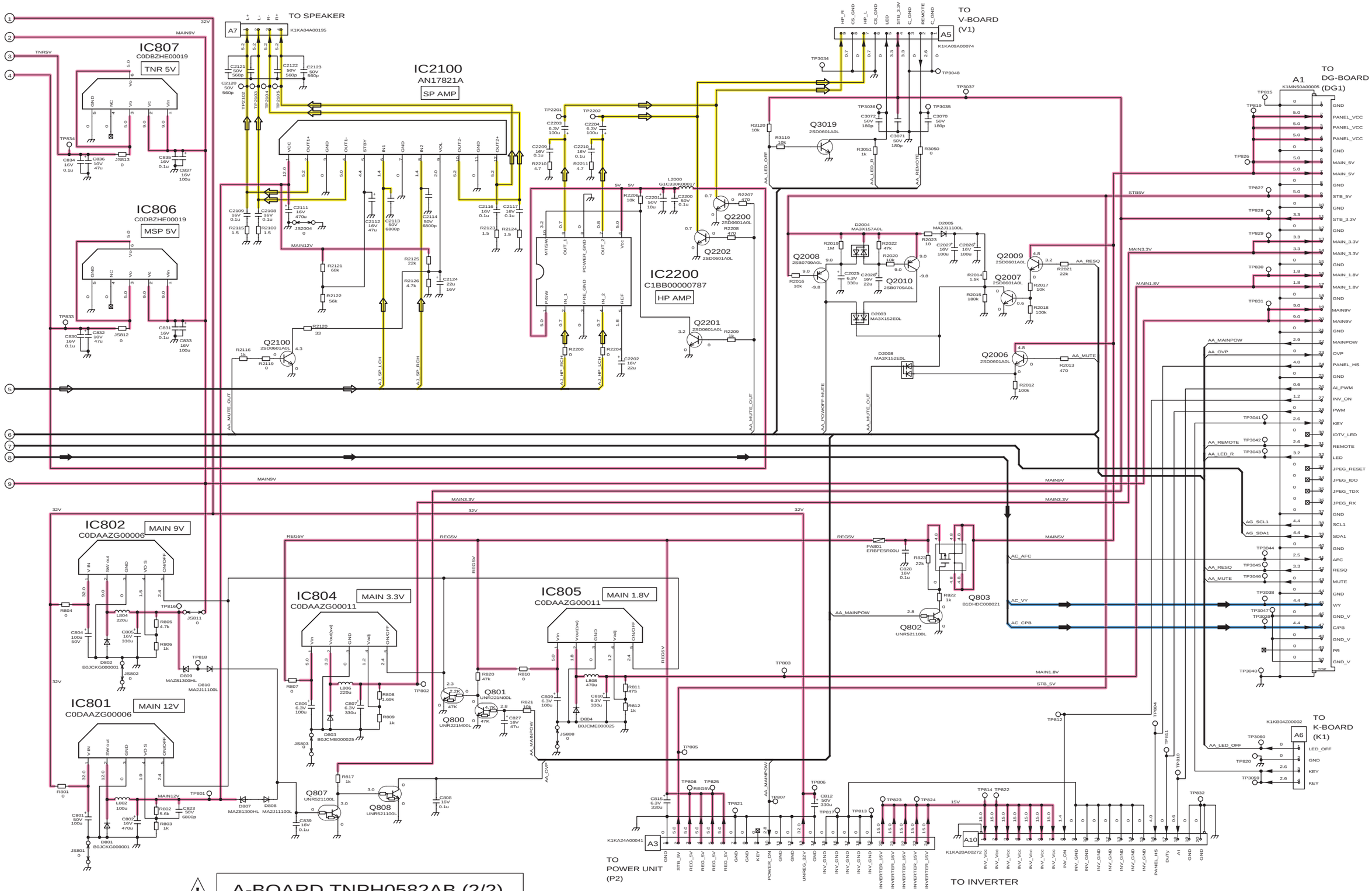
TX-22LX2F/P
V-BOARD TNPA3274AA

TX-22LX2F/P
K-BOARD TNPA3275AA

TX-22LX2F/P
B-BOARD TNPA3273AB

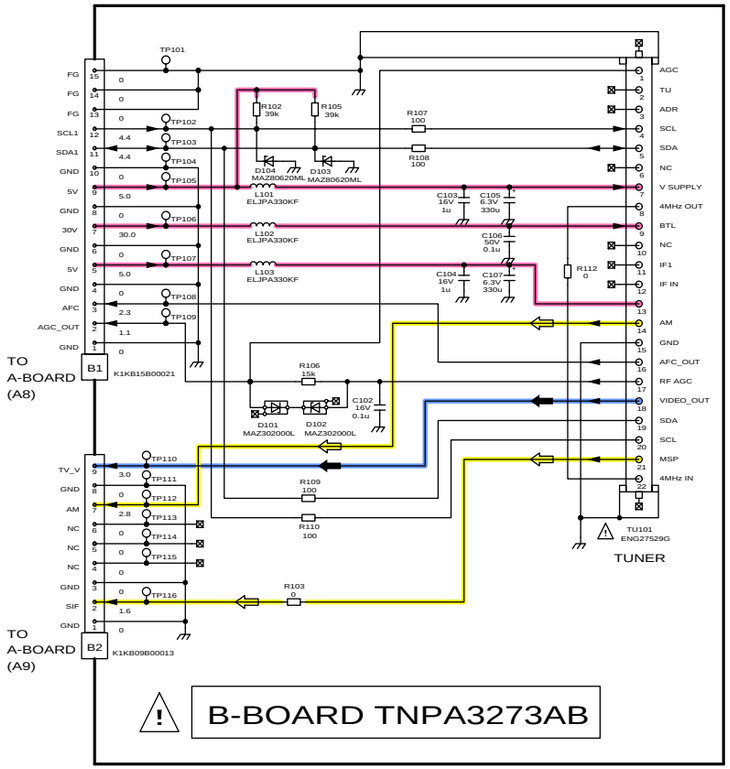
TX-22LX2F/P
V-BOARD TNPA3274AA


JK3001
K1FB121A0006
AV1
JK3002
K1FB121A0006
AV2
JK3003
K1U411A00004
AV3/S
AB
JS3000
A-BOARD TNPH0582AB (1/2)
TO B-BOARD (B1)
K1KA15A00117
RFAGC
TO B-BOARD (B2)
K1KA09A00062
GND
TO DG-BOARD (DG2)
K1KA12A00176
IC803
AN77L08M-E1
AVR 8V
IC2501
C1AB00001942
MSP
IC3001
C1AB00000459
AV SELECTOR
TX-22LX2F/P
A-Board (1 of 2) Schematic Diagram
TX-22LX2F/P
A-Board (1 of 2) Schematic Diagram

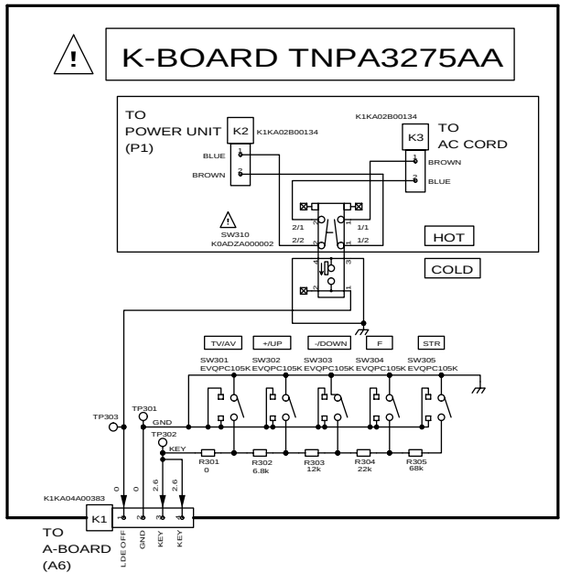


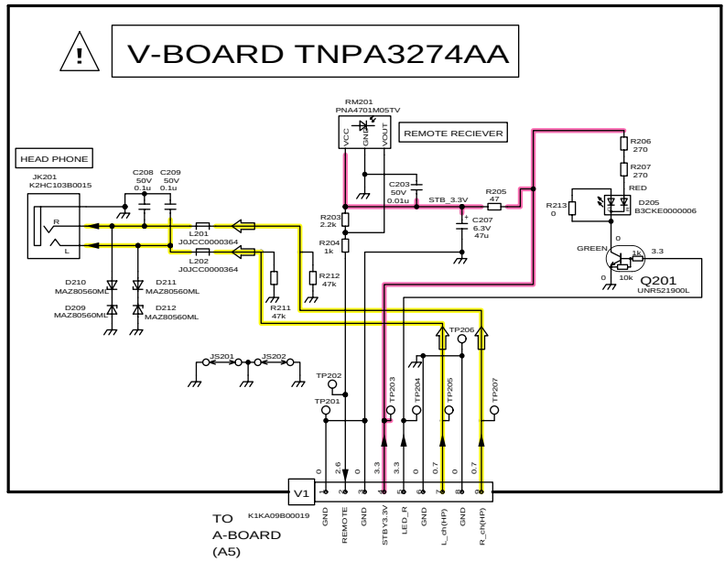
TX-22LX2F/P
A-Board (2 of 2) Schematic Diagram

TX-22LX2F/P
A-Board (2 of 2) Schematic Diagram



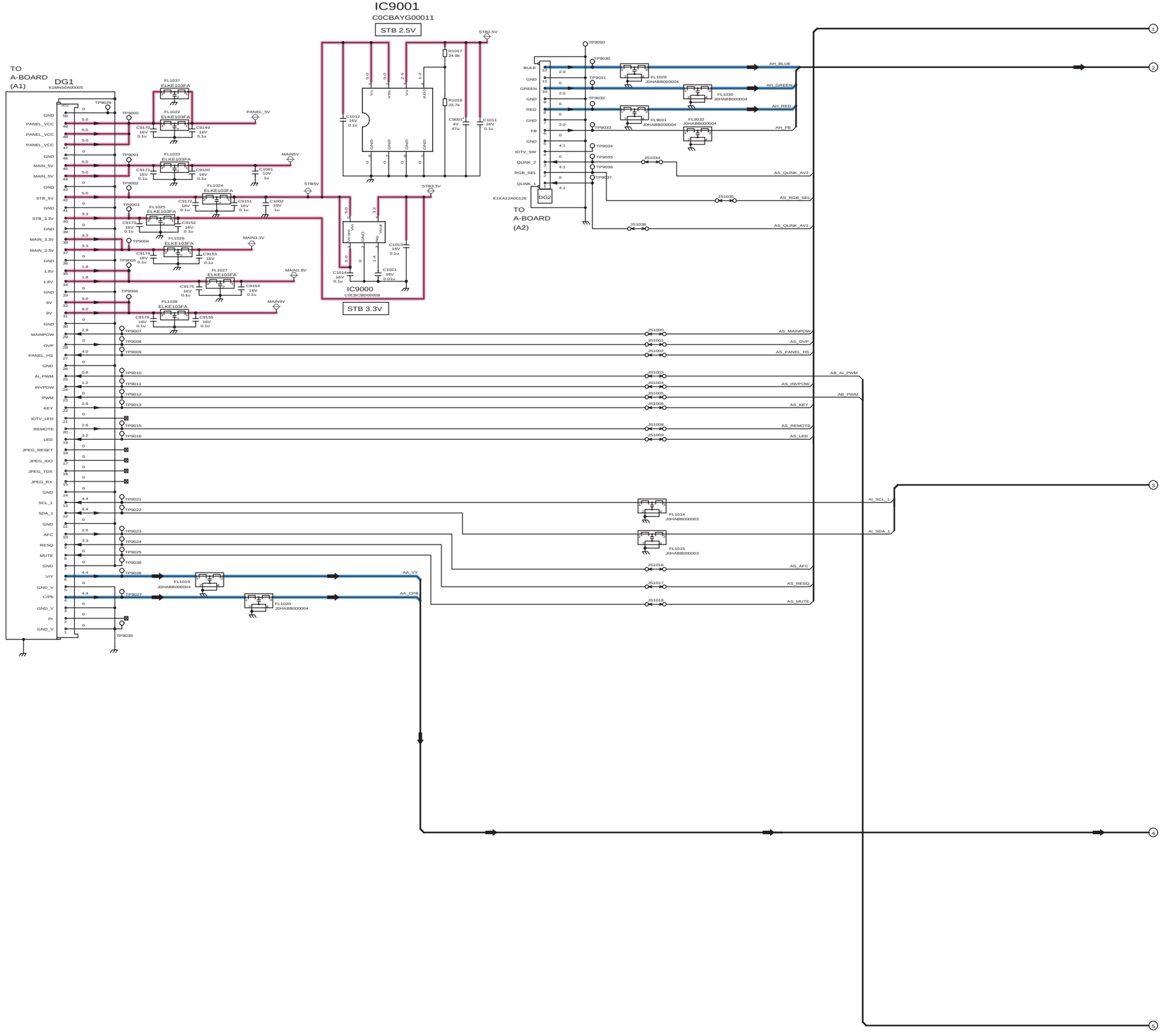
B-BOARD TNPA3273AB





TX-22LX2F/P
B,K and V-Board Schematic Diagram

DG-BOARD (1/7)
TNPA3167AB (TX-22LX2F)
TNPA3167AC (TX-22LX2P)



TX-22LX2F/P
DG-Board (1 of 7) Schematic Diagram

TX-22LX2F/P
DG-Board (1 of 7) Schematic Diagram

DG-BOARD (2/7)
TNPA3167AB (TX-22LX2F)
TNPA3167AC (TX-22LX2P)

IC4005
C0CBCBD00008
AD 3.3V

IC4012
C0CBCAD00012
AD 2.5V

IC4017
C1AB00001868
GC3FM

8bit A/D
FORMAT CONV.
IC4002
C1AB00001834
SCART RGB A/D

IC4030
C0CBCAD00012
MAIN 2.5V

IC4029
C0ABBA000138
OP AMP

IC4011
C0CBCAC00095
PLL 2.5V

TX-22LX2F/P
DG-Board (2 of 7) Schematic Diagram

TX-22LX2F/P
DG-Board (2 of 7) Schematic Diagram

DG-BOARD (3/7)
TNPA3167AB (TX-22LX2F)
TNPA3167AC (TX-22LX2P)

AS_I2C3_RST

IC4101
C0JBAB000382
CLOCK

C4145 10V 1u
L4101 J03EC0000021
R4374 0R
MAIN3.3V
R4162 22
R4101 1M
R4112 1.8k
C4102 50V 15p
X4101 HOJ20250002 20.25MHZ
C4153 18p 50V
R4152 22
R4787 22

OSD

MAIN9V
AS_OSDB
Blue
R4042 330
R4063 0
Q4016 2SA2077OOL
R4003 1k
C4027 16V 0.1u
C4038 16V 0.1u
C4029 6.3V 10u
R4083 470
C4033 50V 39p
Q4026 2SC5845OOL
C4045 16V 0.1u
R4106 1k
R4126 22k
L4005 J03HC0000078
C1015 47u 16V
C4041 16V 0.1u

AS_OSDG
Green
R4041 0
R4064 330
Q4017 2SA2077OOL
R4004 1k
C4025 16V 0.1u
C4039 16V 0.1u
C4030 6.3V 10u
R4084 470
C4034 50V 39p
Q4027 2SC5845OOL
C4046 16V 0.1u
R4107 1k
R4122 22k

AS_OSDR
Red
R4040 0
R4062 330
Q4018 2SA2077OOL
R4005 1k
C4026 16V 0.1u
C4037 16V 0.1u
C4028 6.3V 10u
R4085 470
C4035 50V 39p
Q4028 2SC5845OOL
C4047 16V 0.1u
R4127 22k
R4108 1k

R4096 0
C4031 16V 0.1u
IC4004
C0CBCBD00008
AD 3.3V
MAIN5V
C4032 16V 0.1u
L4004 J0JCC0000241
C4036 1u 10V
C4059 0.1u 16V
L4061 J0JCC0000241
C4044 47u 4V
C4055 16V 0.1u

SDA_0
SCL_0
R4140 22
R4141 22
R4136 22
R4137 10k
R4149 0

R4170 D1HG6808A002
R4181 D1HG6808A002
OSDR[0..7] OSDG[0..7] OSDB[0..7]

C4091 50V 1000p
C4094 50V 1000p
C4105 50V 1000p
MAIN3.3V

R4145 68
C4072 6.3V 1u
C4082 16V 0.1u
R4134 102
R4146 68
C4074 6.3V 1u
C4070 6.3V 1u
R4135 68
C4073 6.3V 1u
C4081 16V 0.1u
R4133 102
R4147 68
C4079 50V 1000p
C4080 50V 1000p

Blue in
Red in
Green in
FB in

8bit A/D
FORMAT CONV.
IC4001
C1AB00001834
OSD RGB A/D

(I2C Decorder CLK)

C4092 50V 1000p
C4093 50V 1000p
C4097 50V 1000p
R4187 0
R4164 0
R4153 0
R4163 0
R4172 0

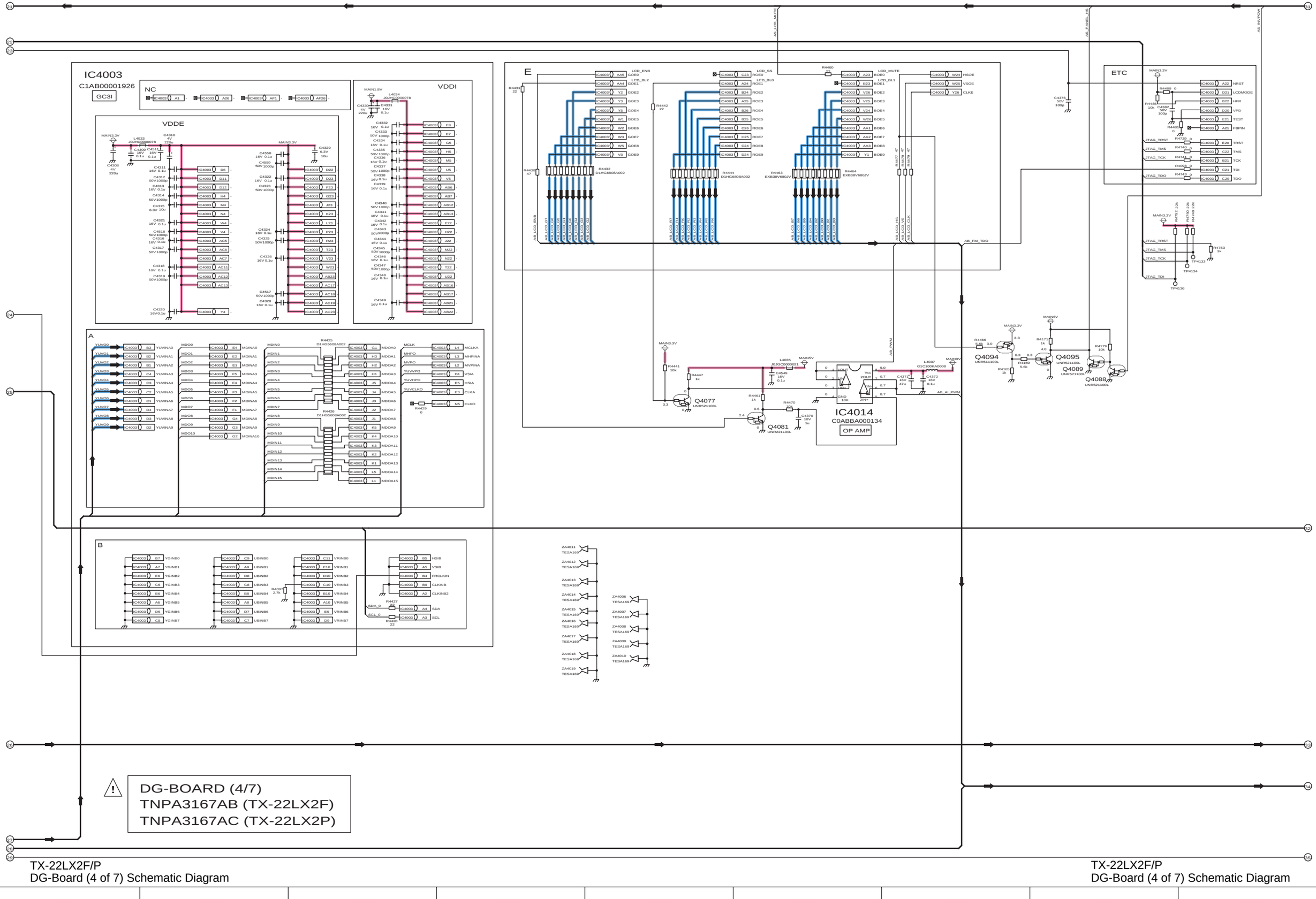
R4761 0
C4498 16V 0.1u
R4737 0
AS_BLK
IC4024
C0JBAZ001769
BUFFER
R4762 100

R4212 68
C4110 16V 0.1u
C4118 6.3V 1u
R4222 102
R4215 68
C4122 6.3V 1u
C4111 16V 0.1u
R4216 51
R4217 150
R4219 51
C4114 6.3V 1u
C4123 6.3V 1u
C4112 50V 0.01u
C4098 16V 0.1u
R4231 0
R4807 0

ALFA0
ALFA1
ALFA2
ALFA3
R4207 68
R4208 68
R4209 68
R4210 68

MAIN3.3V
L4060 J0JCC0000241
C4064 10V 1u
JS4014
L4011 J0JCC0000241

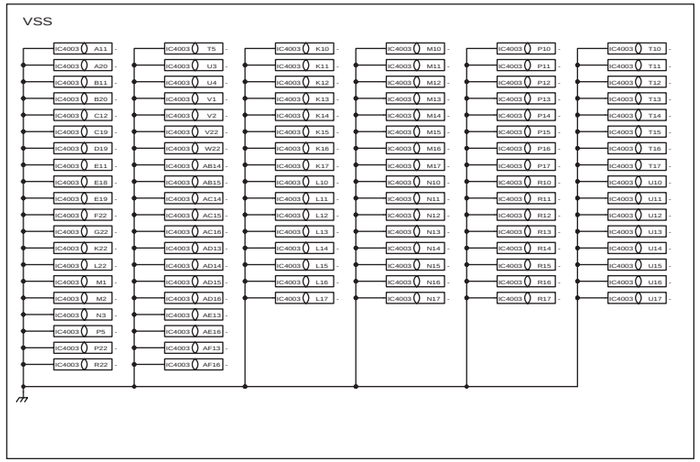
TX-22LX2F/P
DG-Board (3 of 7) Schematic Diagram

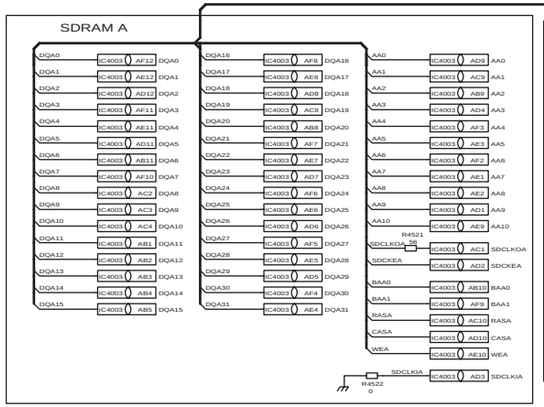


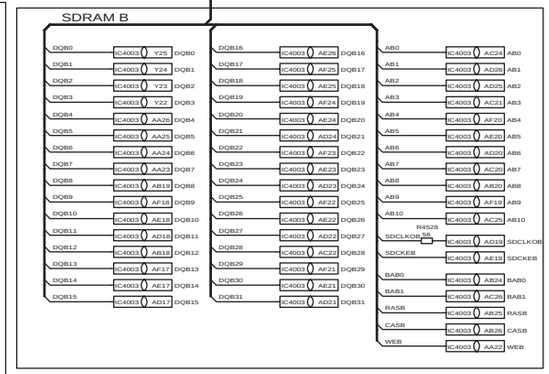
TX-22LX2F/P
DG-Board (4 of 7) Schematic Diagram

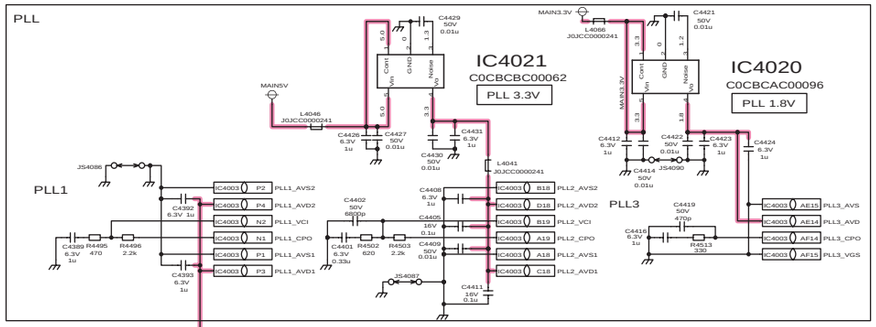
TX-22LX2F/P
DG-Board (4 of 7) Schematic Diagram

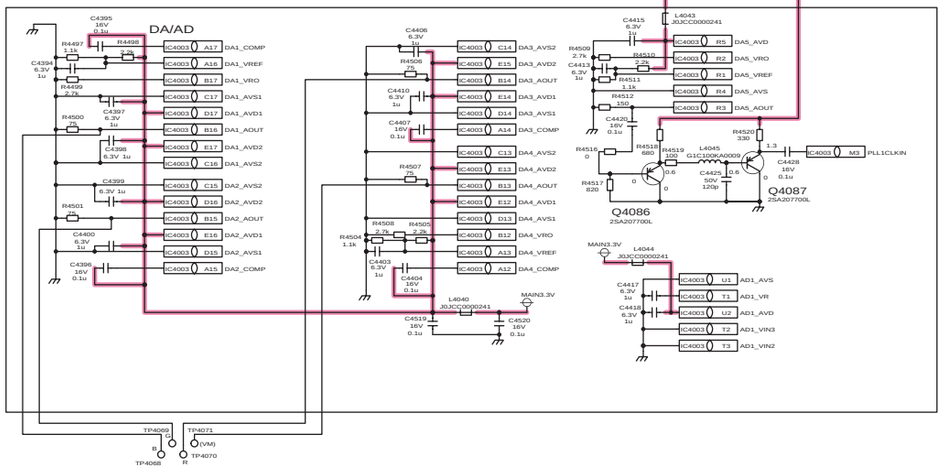
28 29 30 31 32 33 34 35 36

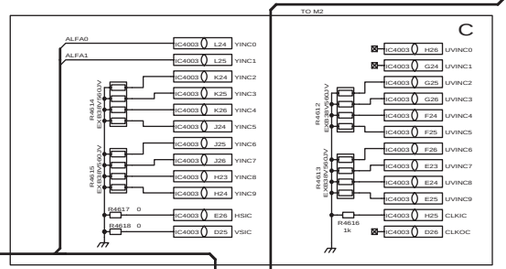


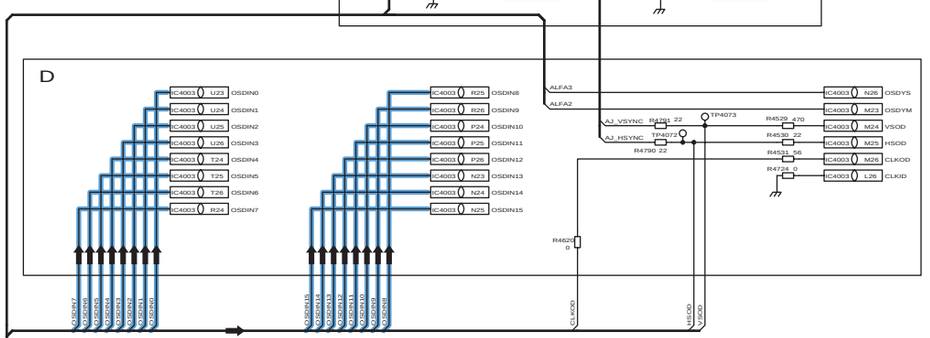






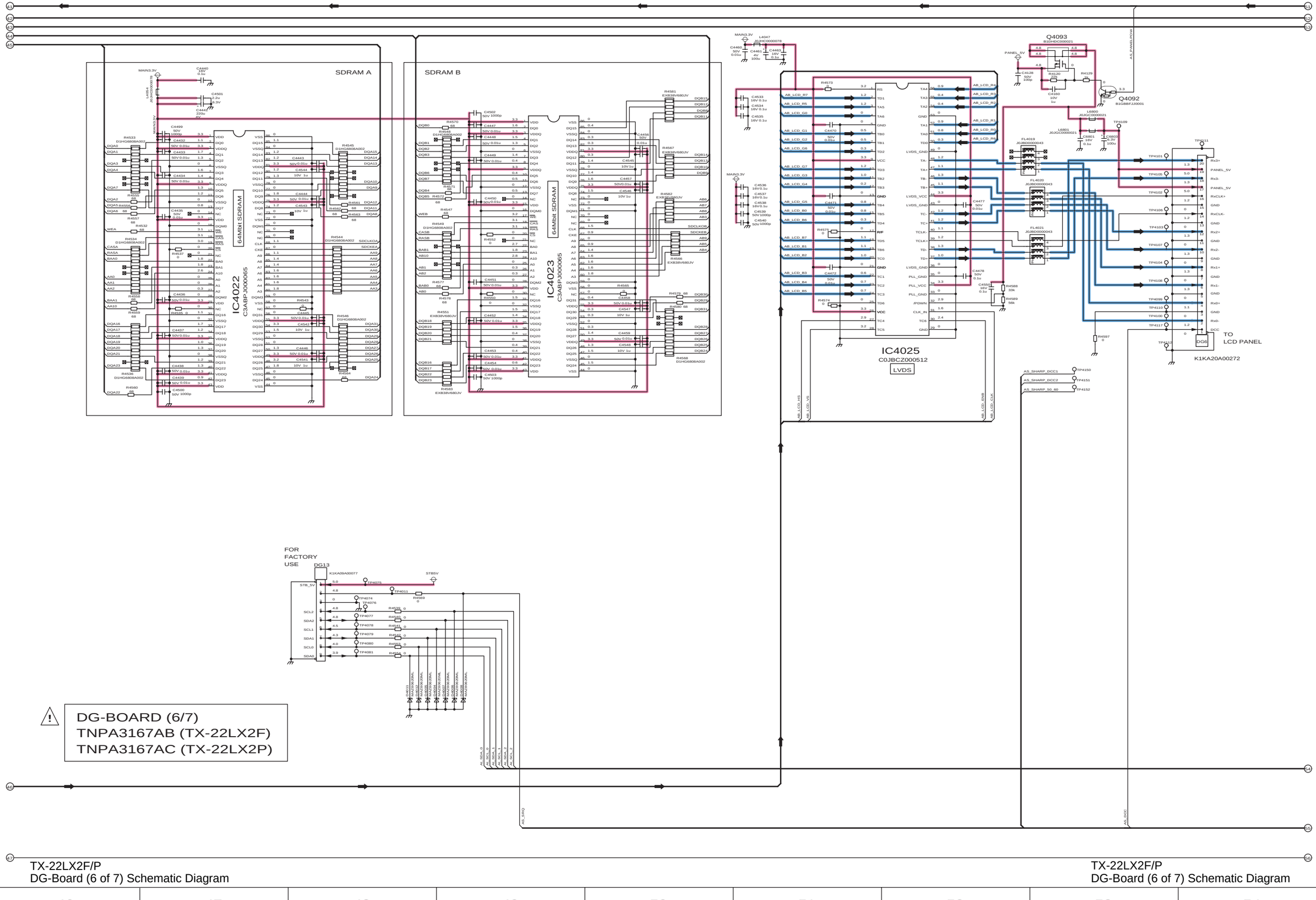


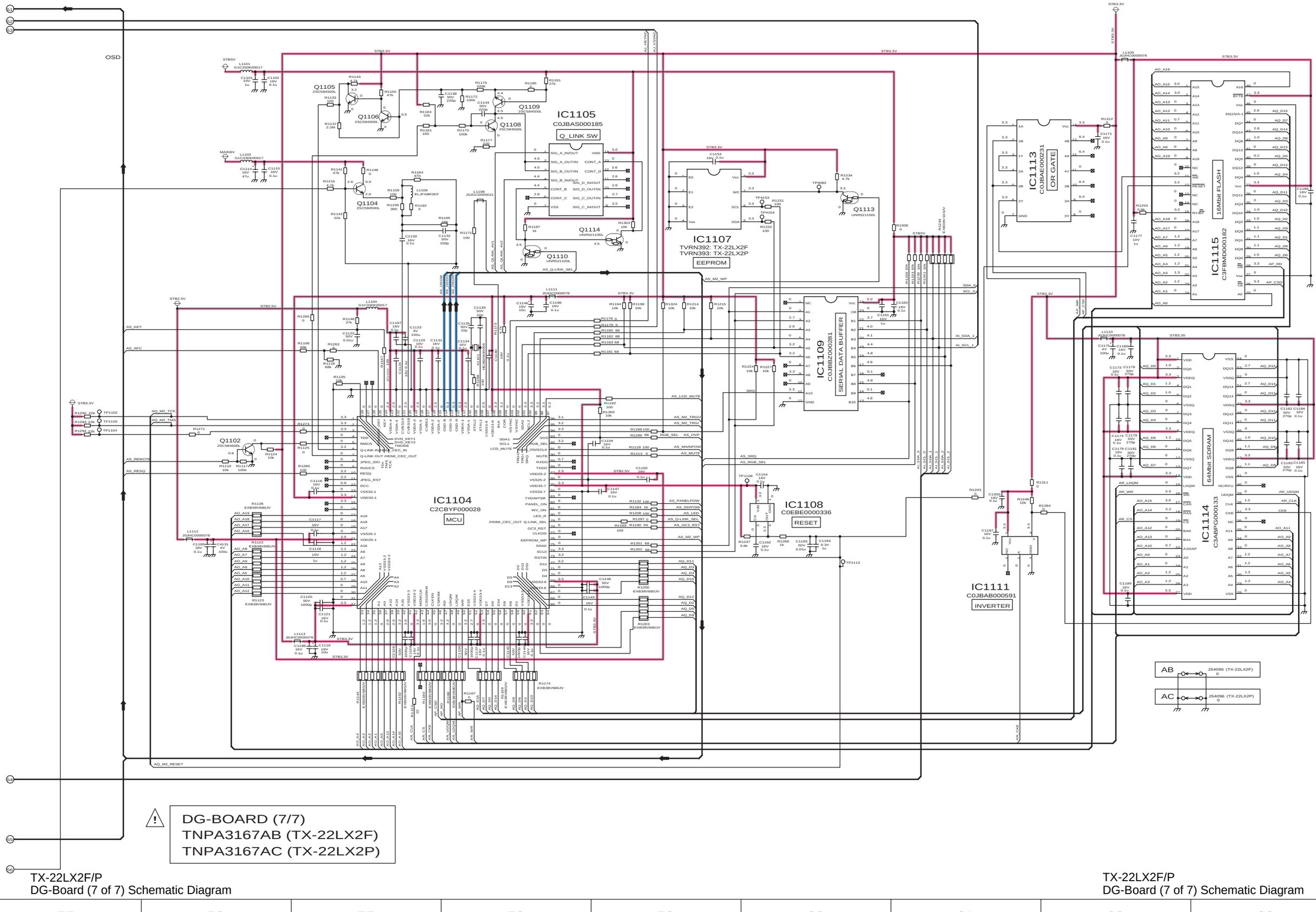




DG-BOARD (5/7)
TNPA3167AB (TX-22LX2F)
TNPA3167AC (TX-22LX2P)

TX-22LX2F/P
DG-Board (5 of 7) Schematic Diagram


SDRAM A
SDRAM B
IC4022
C3ABPJ000065
64Mbit SDRAM
IC4023
C3ABPJ000065
64Mbit SDRAM
IC4025
C0JBCZ000512
LVDS
TO
LCD PANEL
K1KA20A00272
DG6
Q4093
B1DHDC000021
Q4092
B1GBBFJJ0001
FOR
FACTORY
USE
DG13
K1KA09A00077
DG-BOARD (6/7)
TNPA3167AB (TX-22LX2F)
TNPA3167AC (TX-22LX2P)



DG-BOARD (7/7)
TNPA3167AB (TX-22LX2F)
TNPA3167AC (TX-22LX2P)

TX-22LX2F/P
DG-Board (7 of 7) Schematic Diagram

TX-22LX2F/P
DG-Board (7 of 7) Schematic Diagram

11 Block and Schematic Diagrams

11.1. Schematic DiagramNotes

Important Safety Notice

Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacture's specified parts.

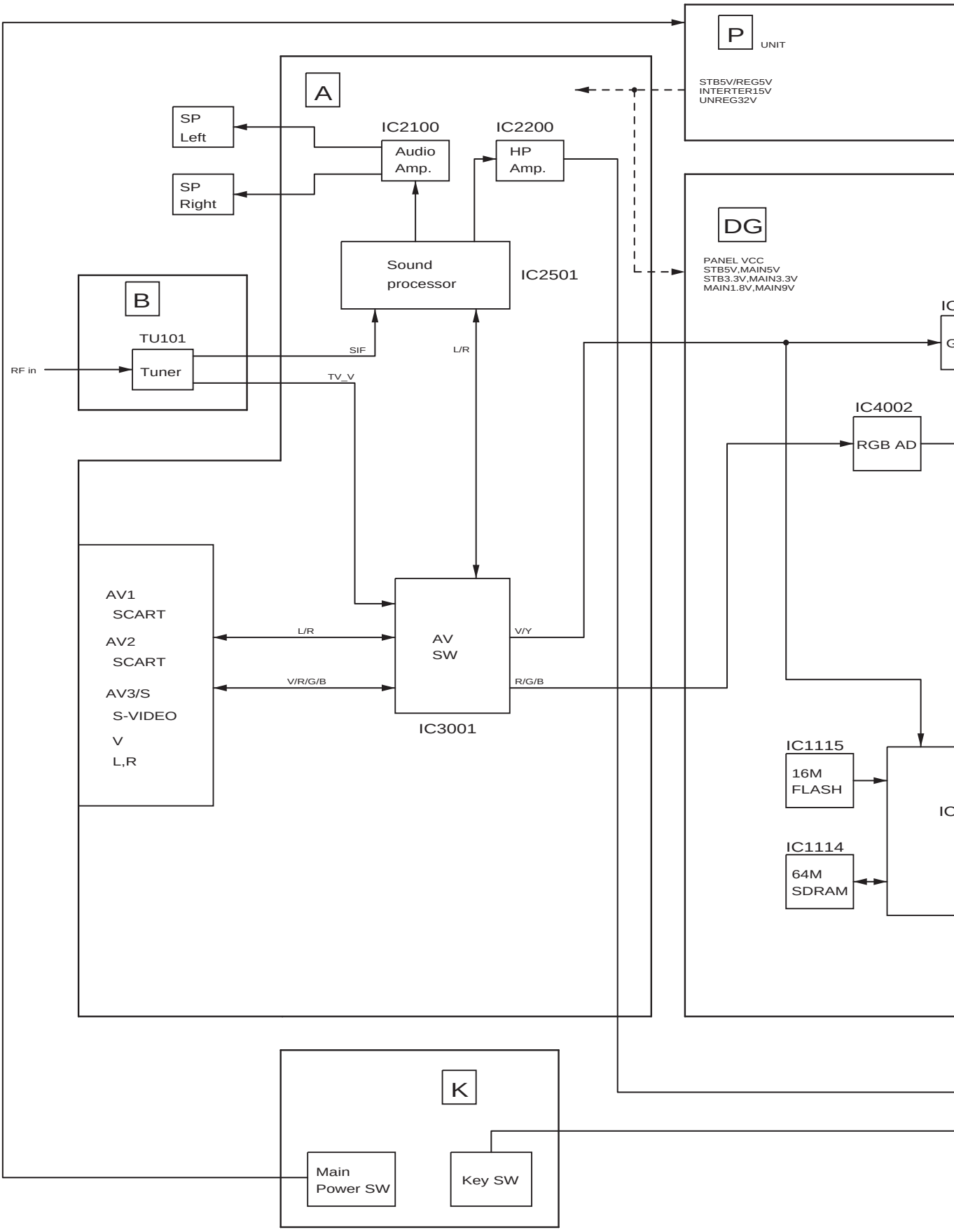
Notes:

1. **Resistor**
   All resistors are cabon 1/4W resistor, unless marked as follows:
   Unit of resistance is OHM [Ω] (K=1,000, M=1,000,000).
2. **Capacitor**
   Unit of capacitance is μF, unless otherwise noted.
3. Coil
   Unit of inductance is μF, unless otherwise noted.
4. Test Point
   ⚲ : Test Point position
5. Earth Symbol
   ⏚ : Chassis Earth (Cold) ⏚ : Line Earth (Hot)
6. Voltage Measurement
   Voltage is measured by a DC voltmeter.
   Conditions of the measurement are the following:
   Power Source ..... AC 220-240V, 50/60Hz
   Receiving Signal ..... Colour Bar signal (RF)
   All customer's controls ..... Maximum positions
7. When arrow mark (↗) is found, connection is easily found from the direction of arrow
8. Indicates the major signal flow. : Video ➡ Audio ⇨
9. This schematic diagram is the latest at the time of printing and subject to change without notice.

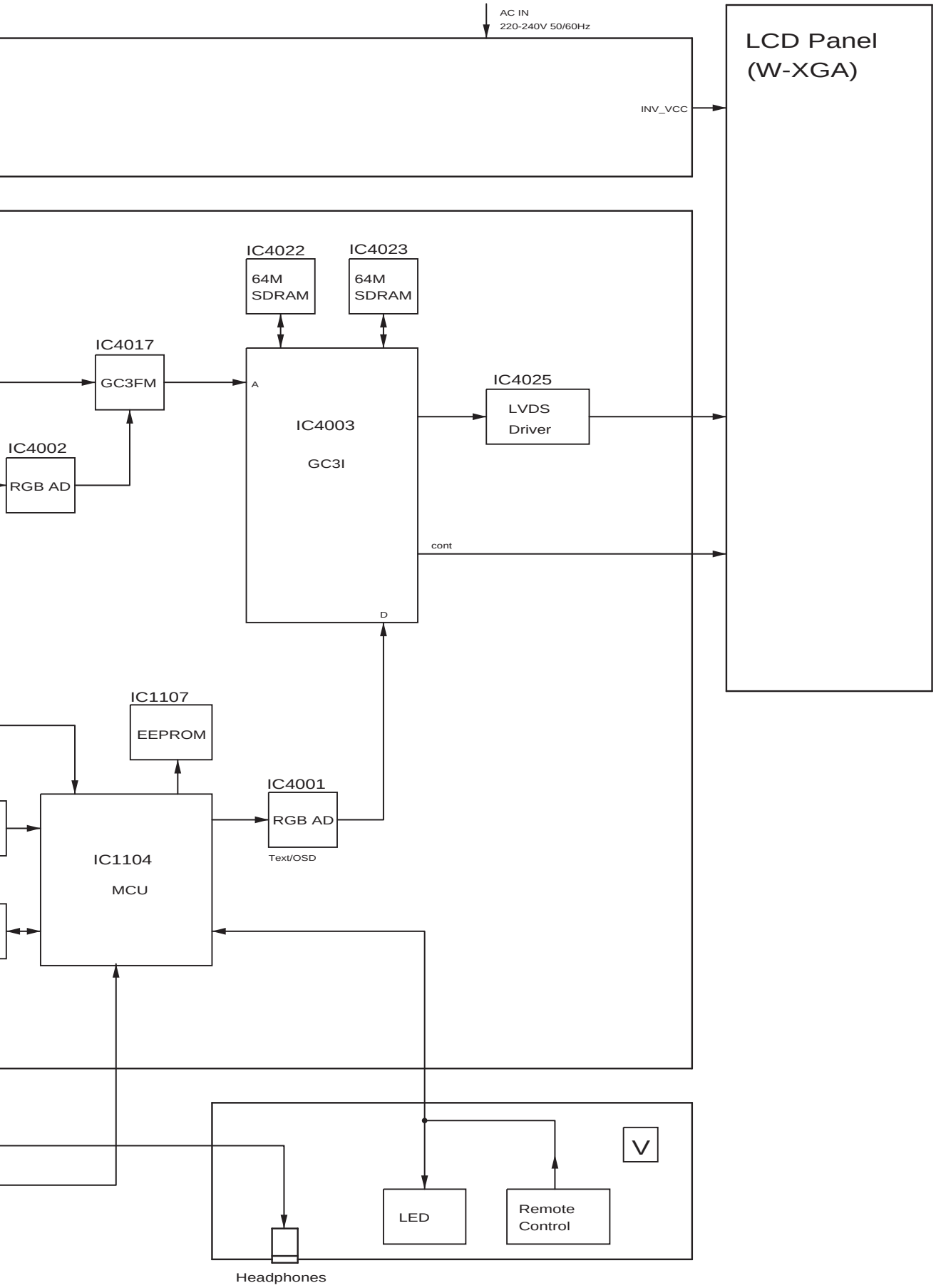
Remarks:

1. The Power Circuit contains a circuit area which uses a separate power supply to isolate the earth connection.
   The circuit is defined by HOT and COLD indications in the schematic diagram. Take the follwing precautions.
   All circuits, except the Power Circuit, are cold.
   Precautions
   a. Do not touch the hot part or the hot and cold parts at the same time or you may be shocked.
   b. Do not short- circuit the hot and cold circuits or a fuse may blow and parts may break.
   c. Do not connect an instrument, such as an oscilloscope, to the hot and cold circuits simultaneously or a fuse may blow.
      Connect the earth of instruments to the earth connection of the circuit being measured.
   d. Make sure to disconnect the power plug before removing the chassis.

11.2. Main Block Diagram

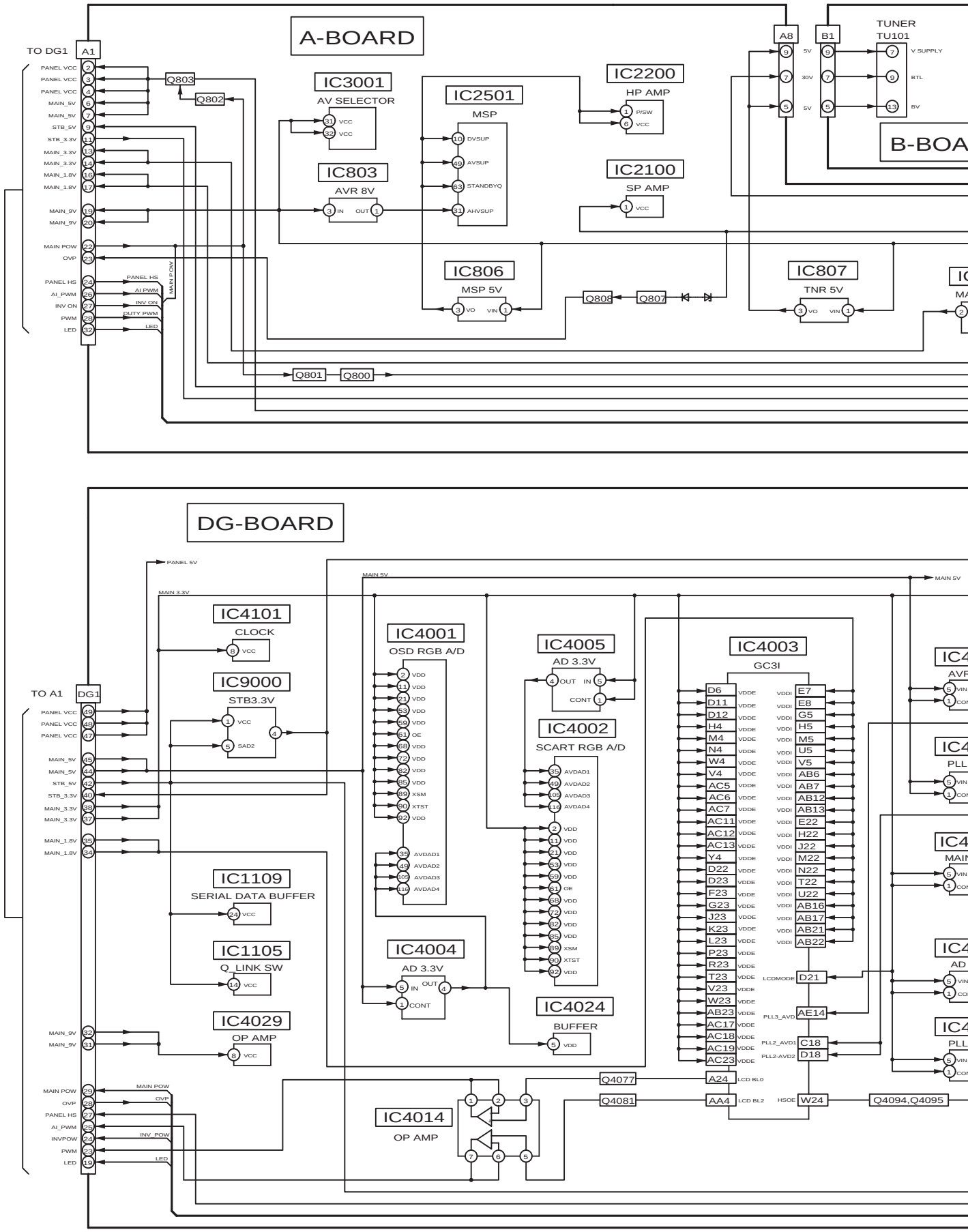


TX-22LX2F/P
Main Block Diagram

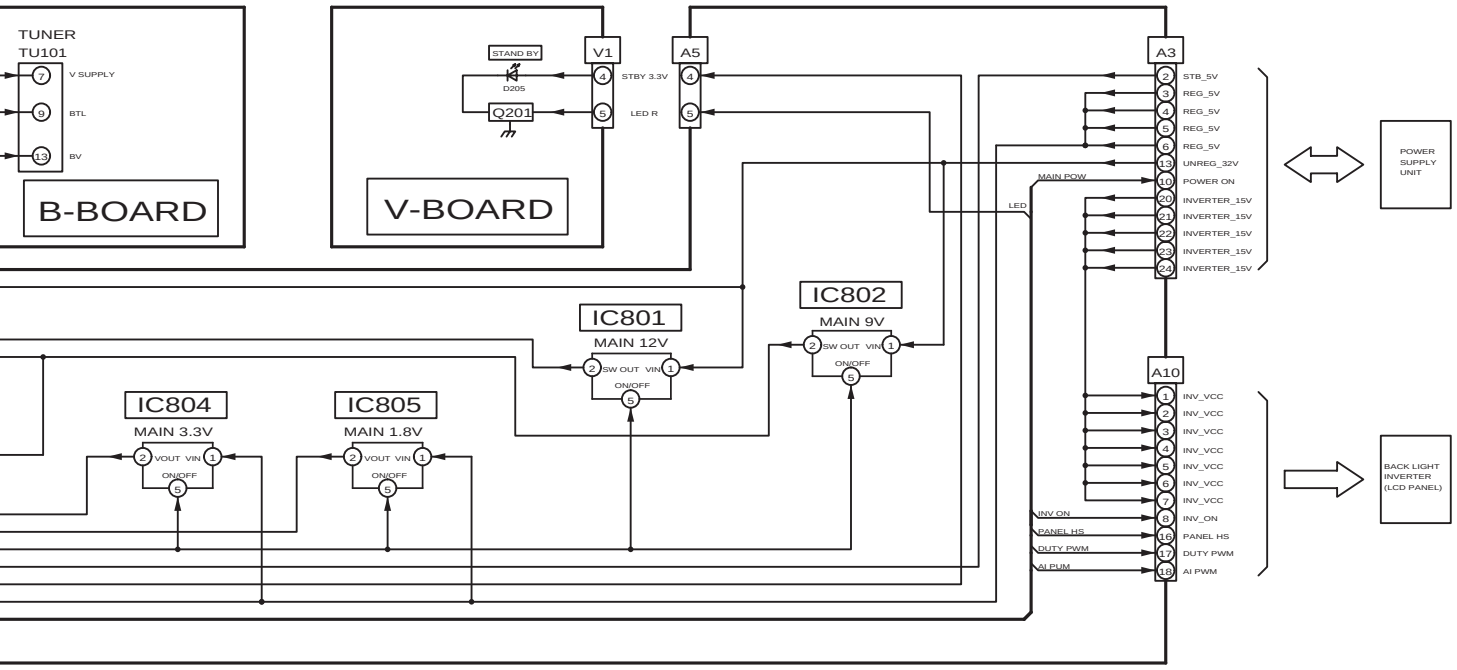


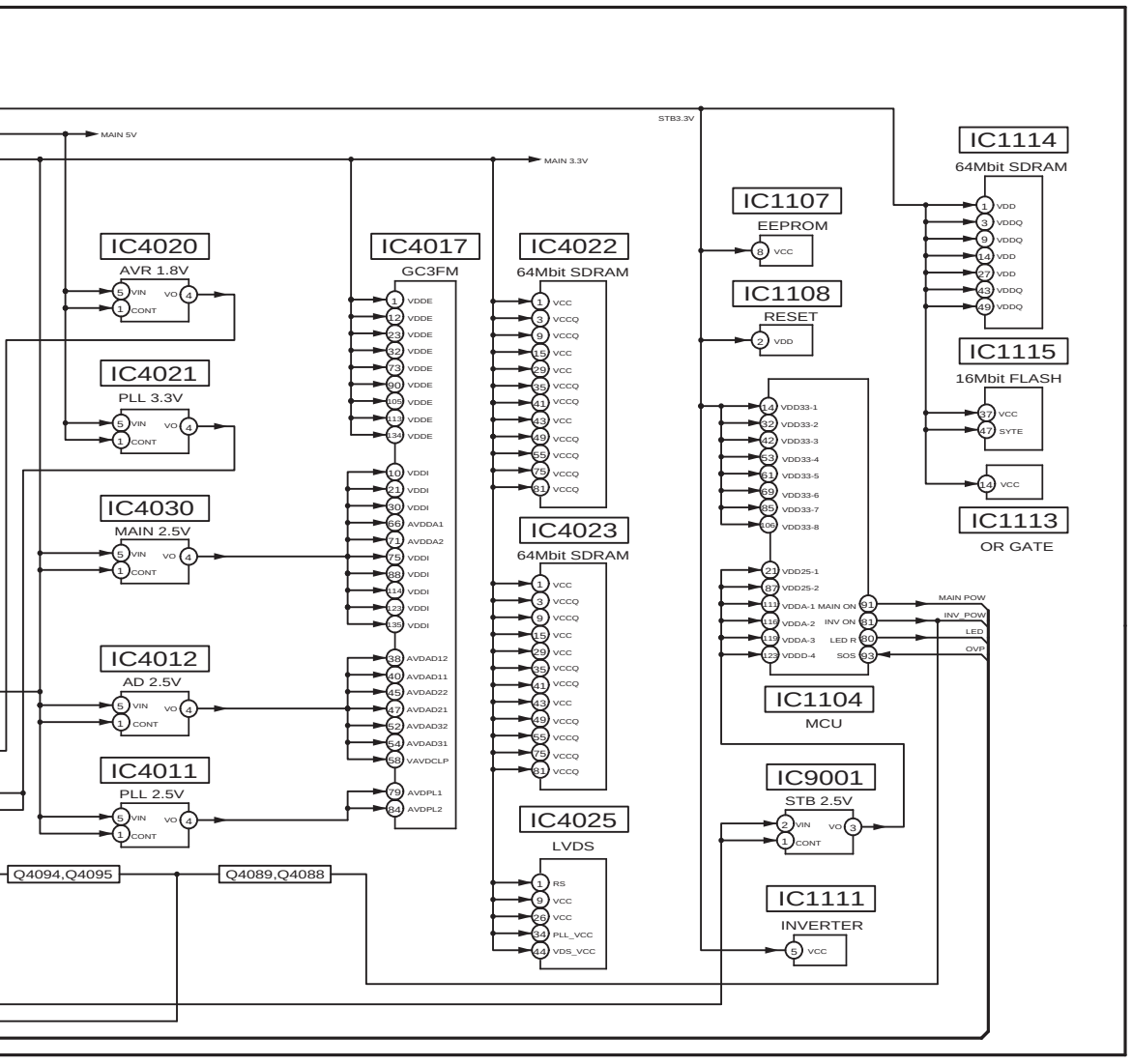
TX-22LX2F/P
Main Block Diagram

11.3. Power Block Diagram



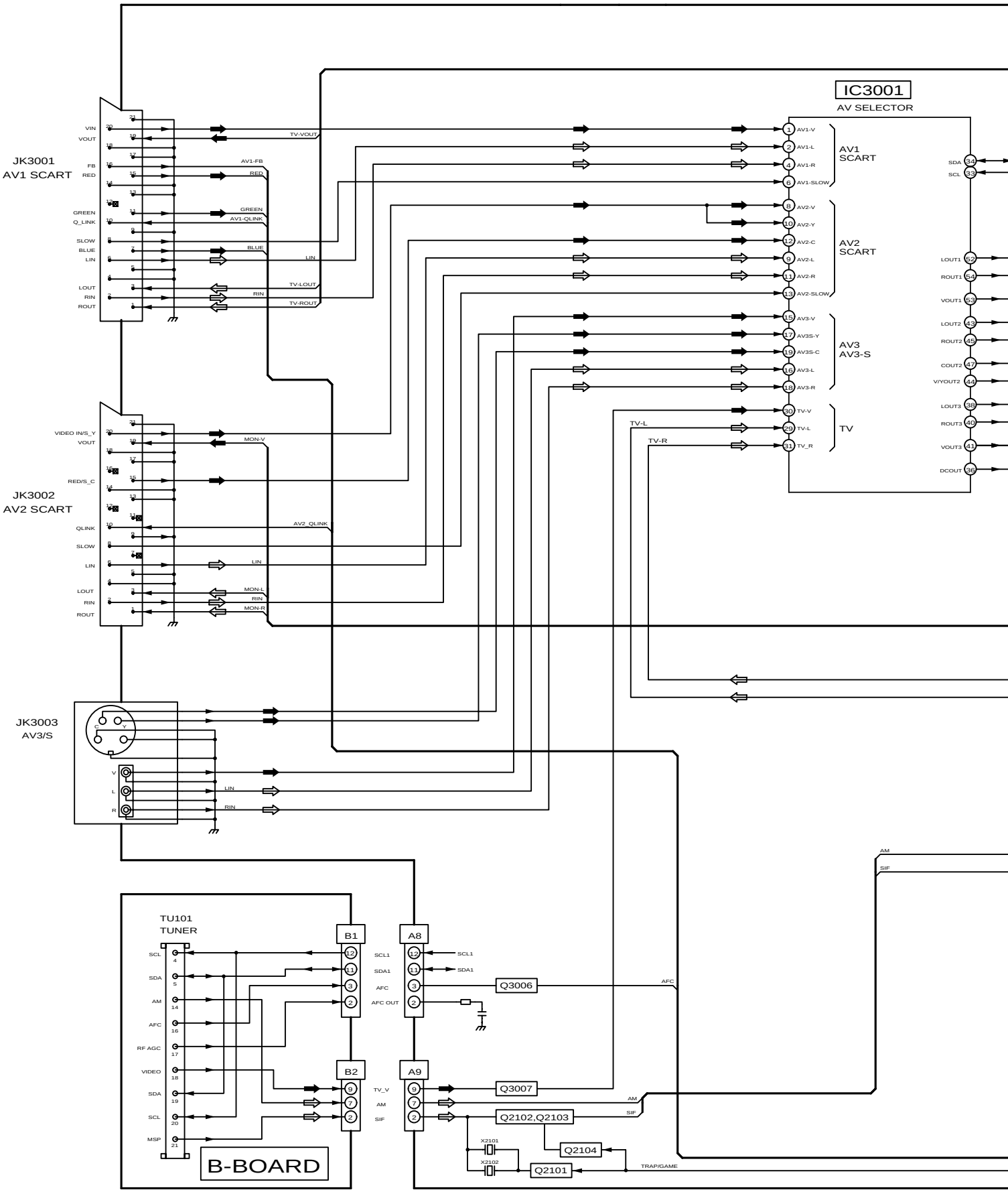
TX-22LX2F/P
Power Block Diagram



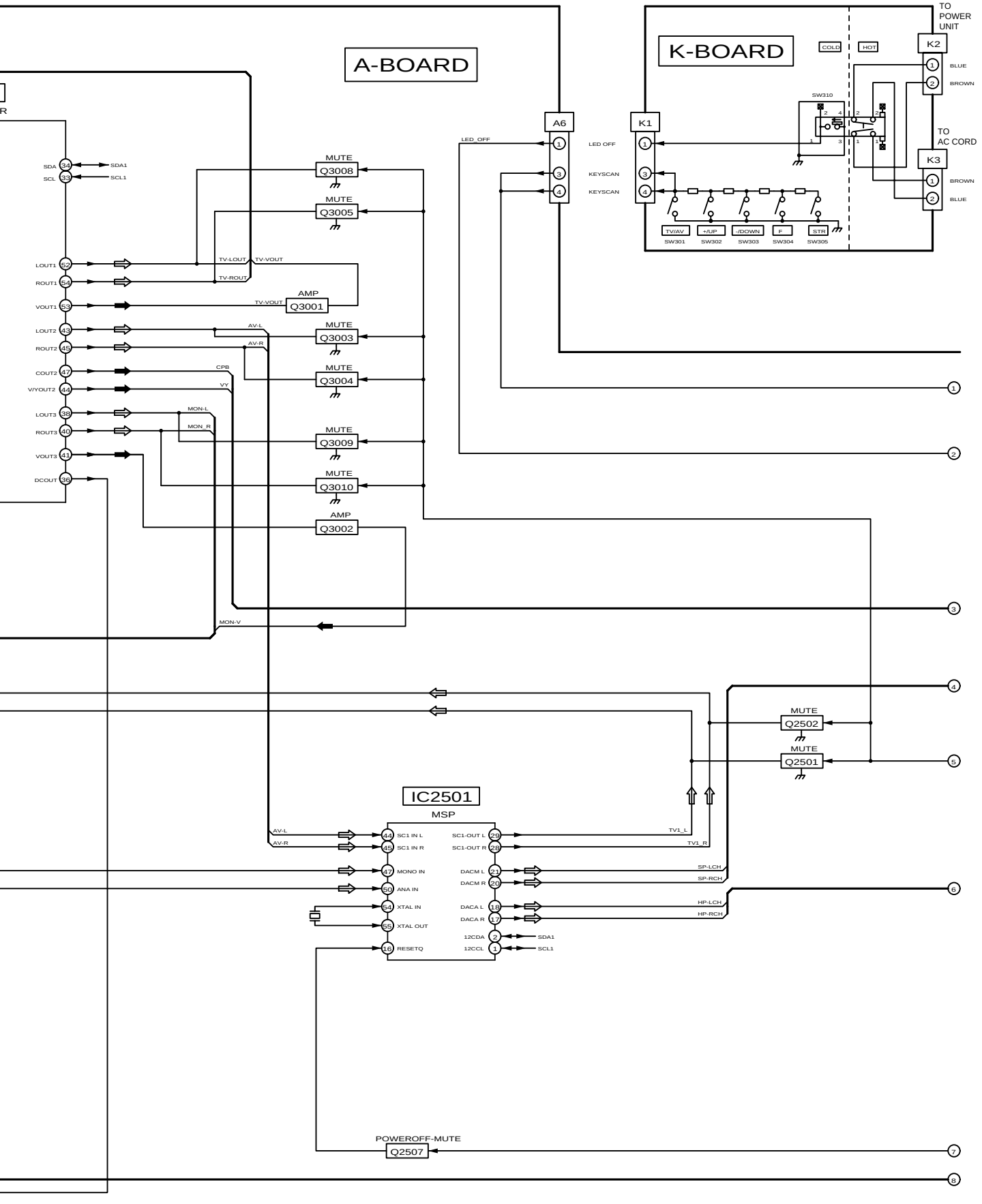


TX-22LX2F/P
Power Block Diagram

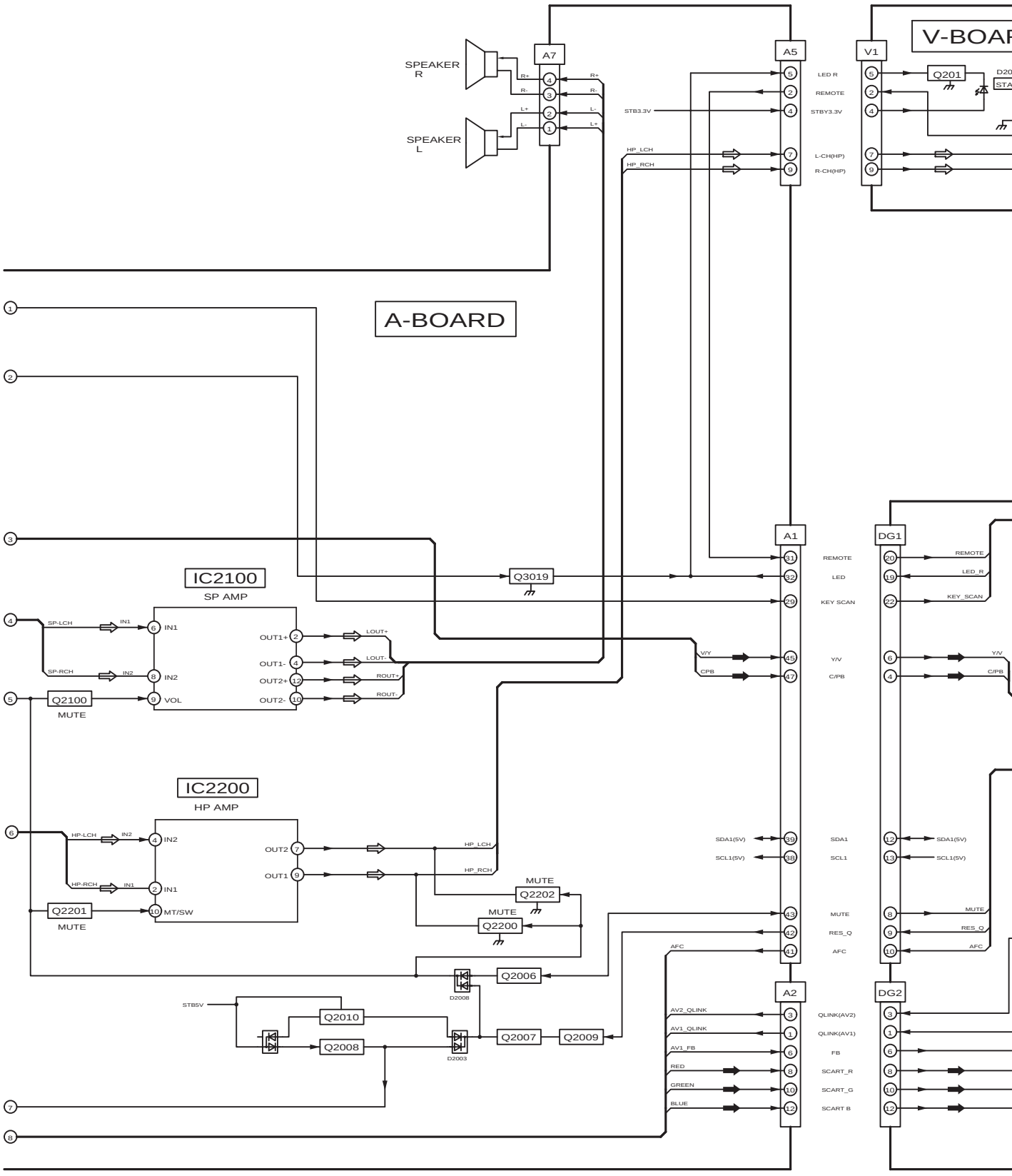
11.4. Signal Block Diagram



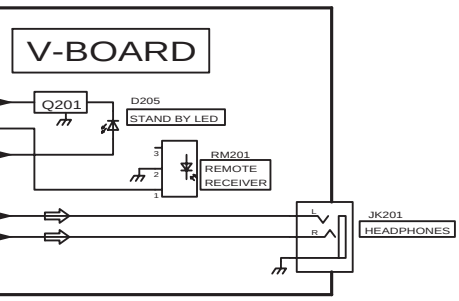
TX-22LX2F/P
Signal Block Diagram

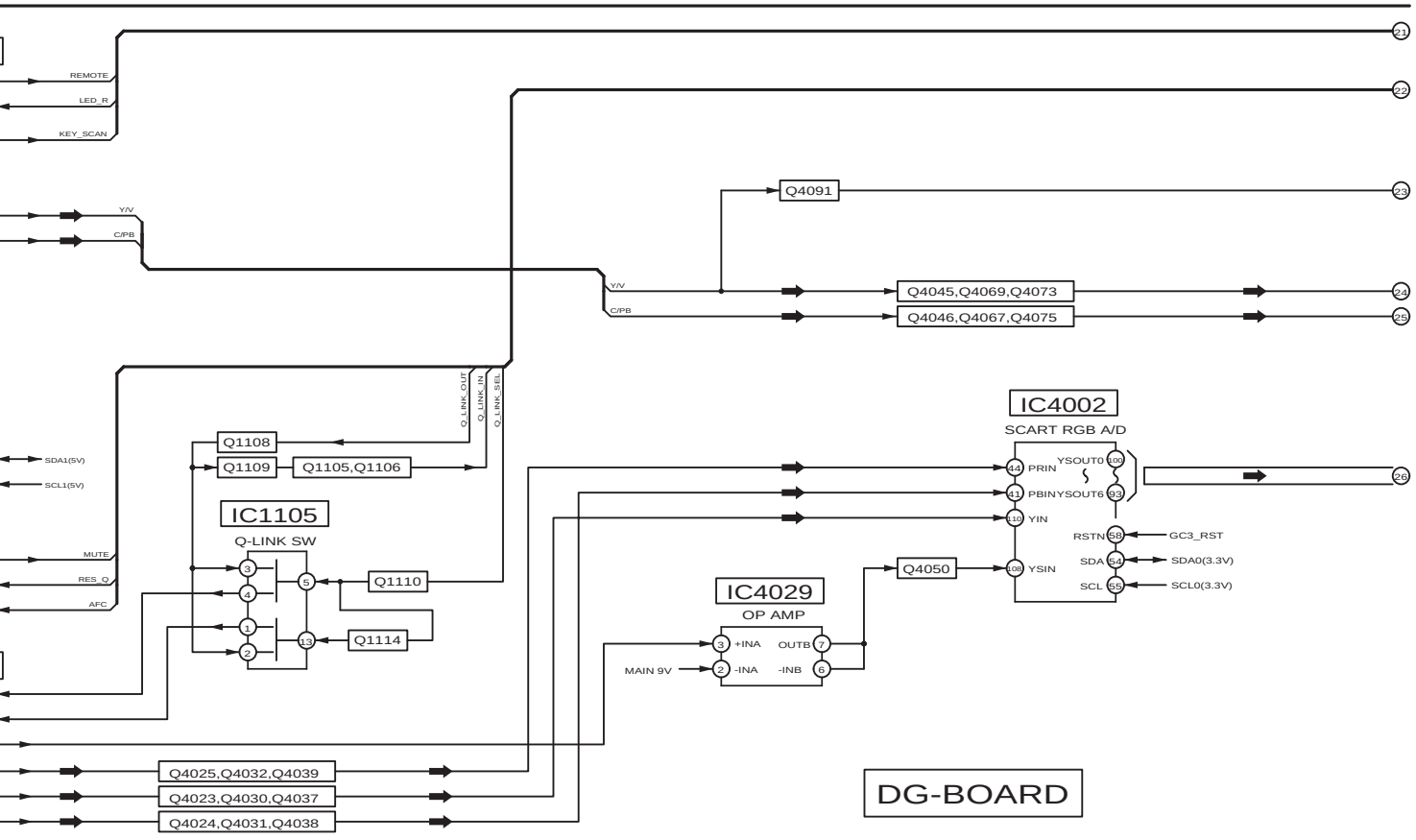


TX-22LX2F/P
Signal Block Diagram

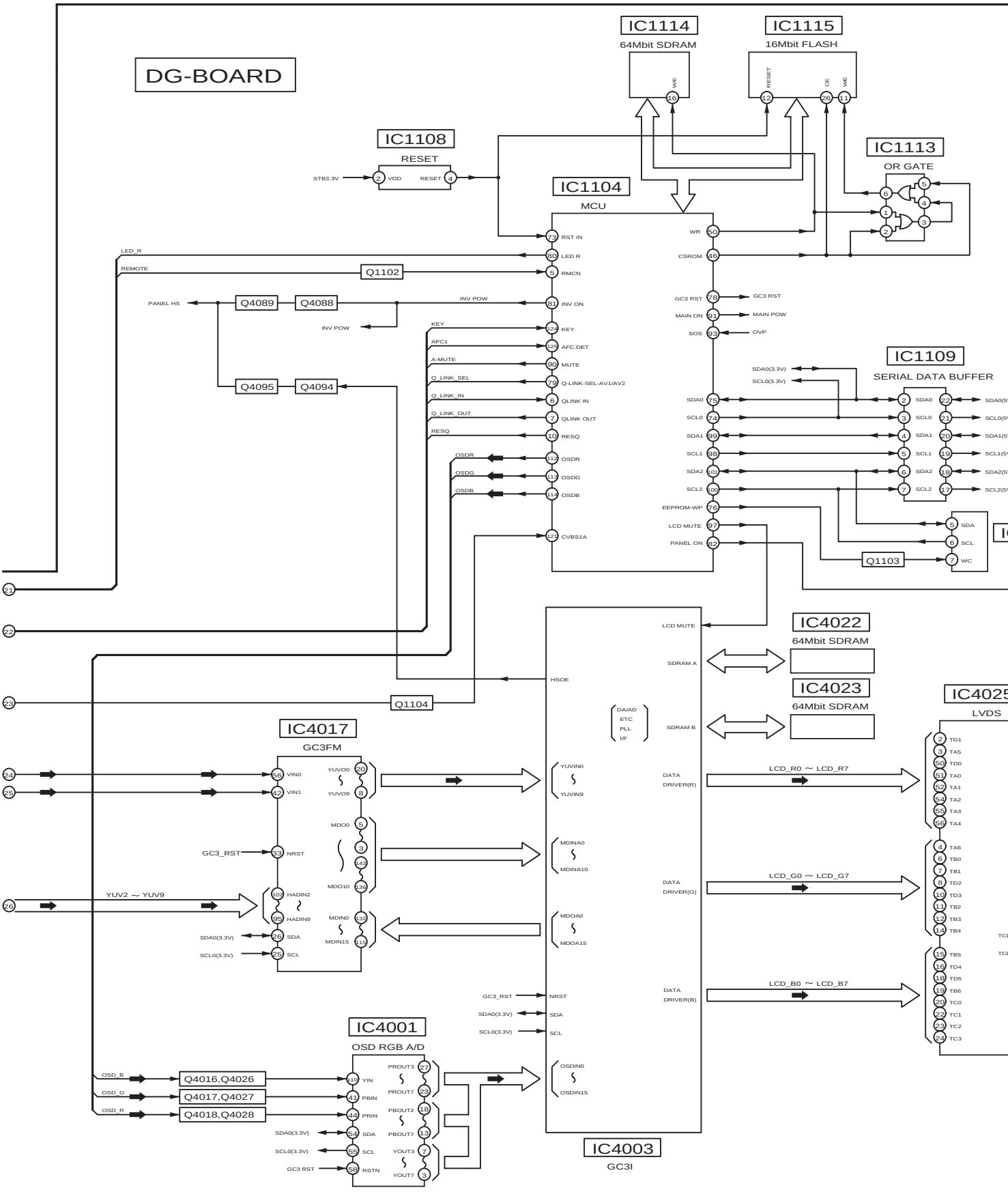


TX-22LX2F/P
Signal Block Diagram

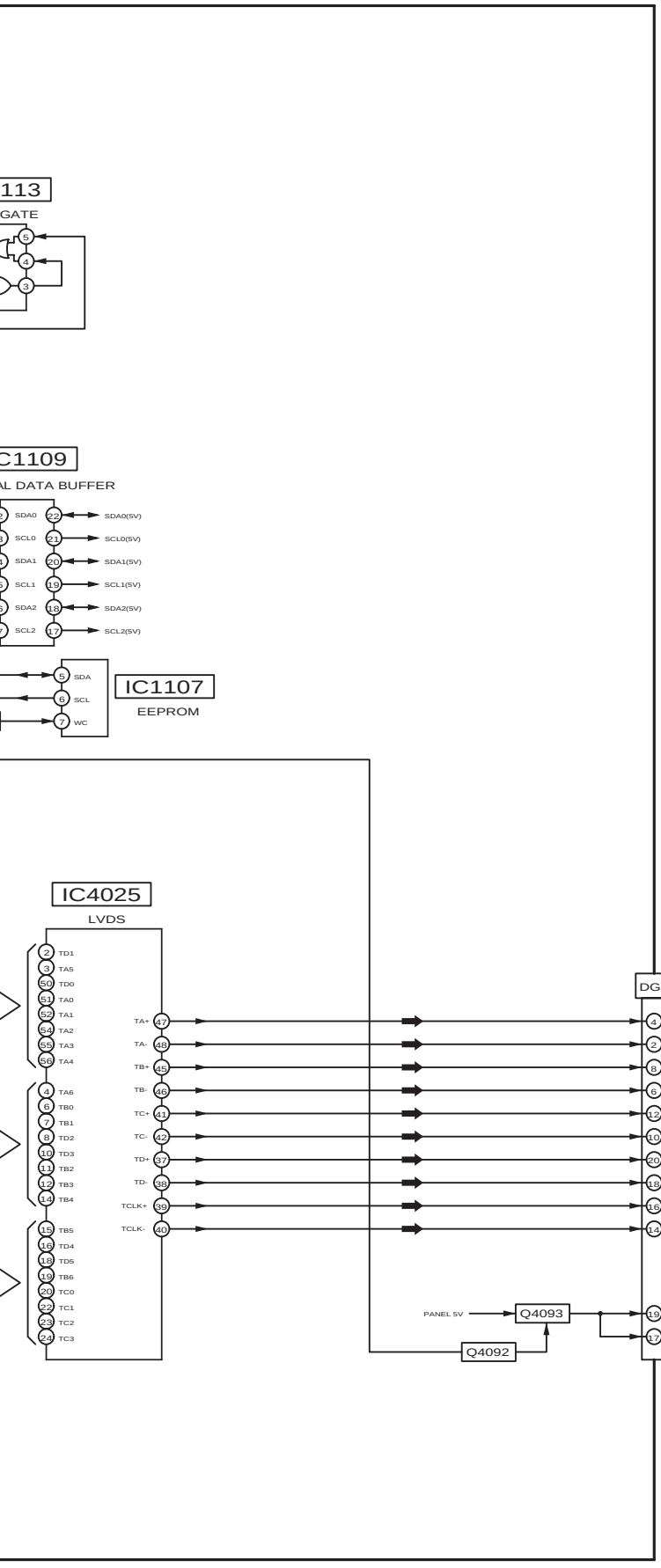




TX-22LX2F/P
Signal Block Diagram

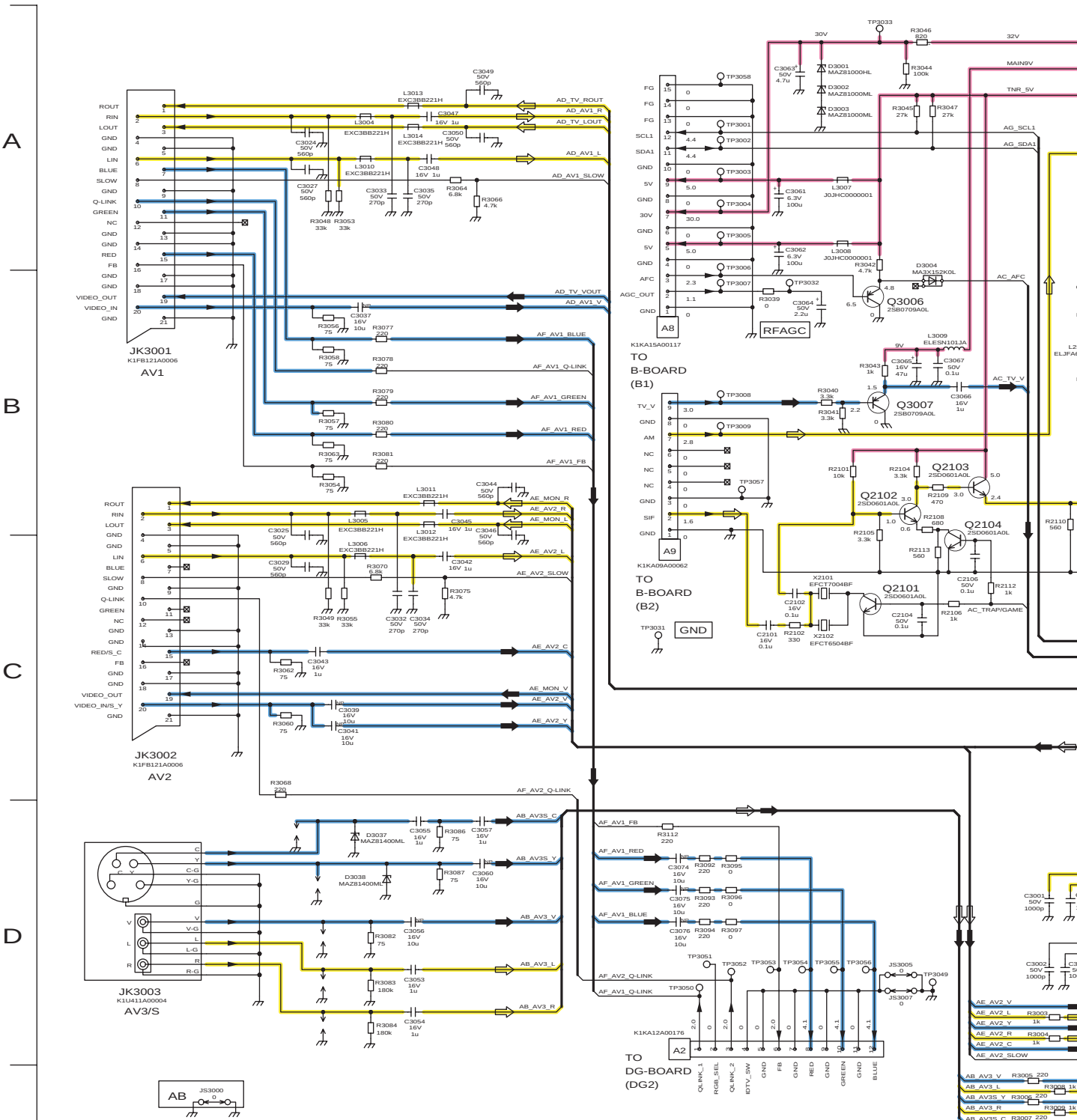


TX-22LX2F/P
Signal Block Diagram

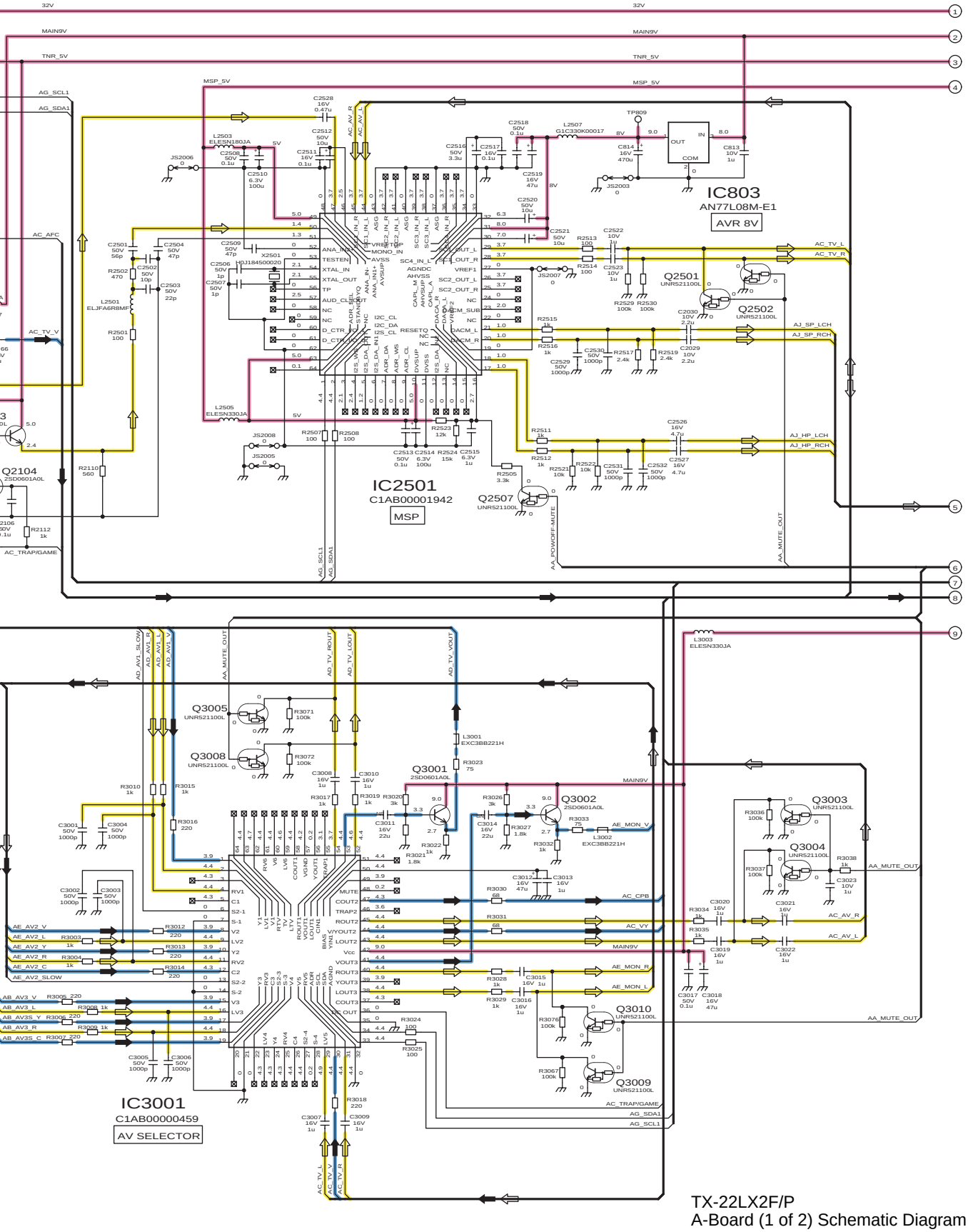


TX-22LX2F/P
Signal Block Diagram

11.5. A-Board (1 of 2) Schematic Diagram

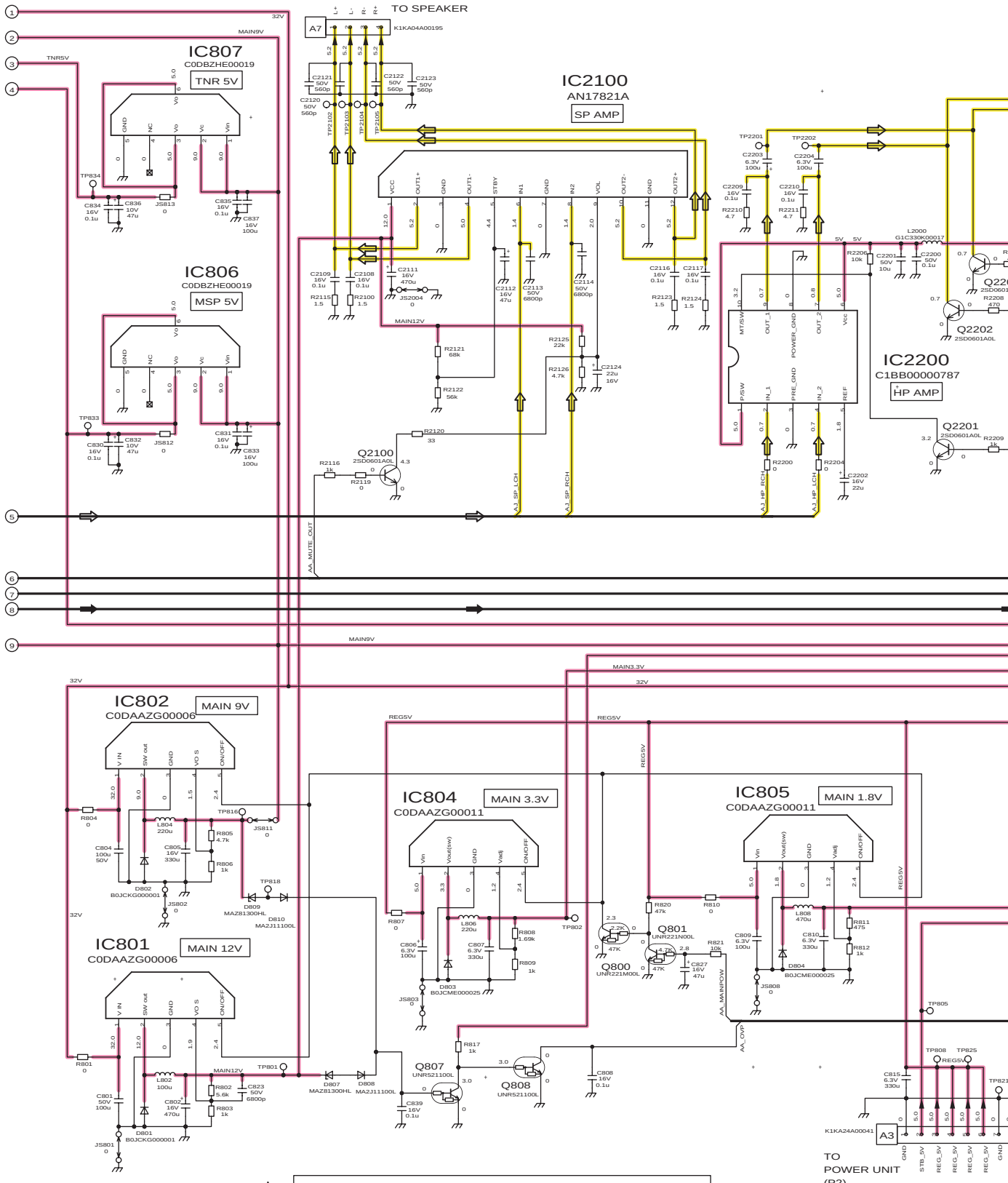


TX-22LX2F/P
A-Board (1 of 2) Schematic Diagram



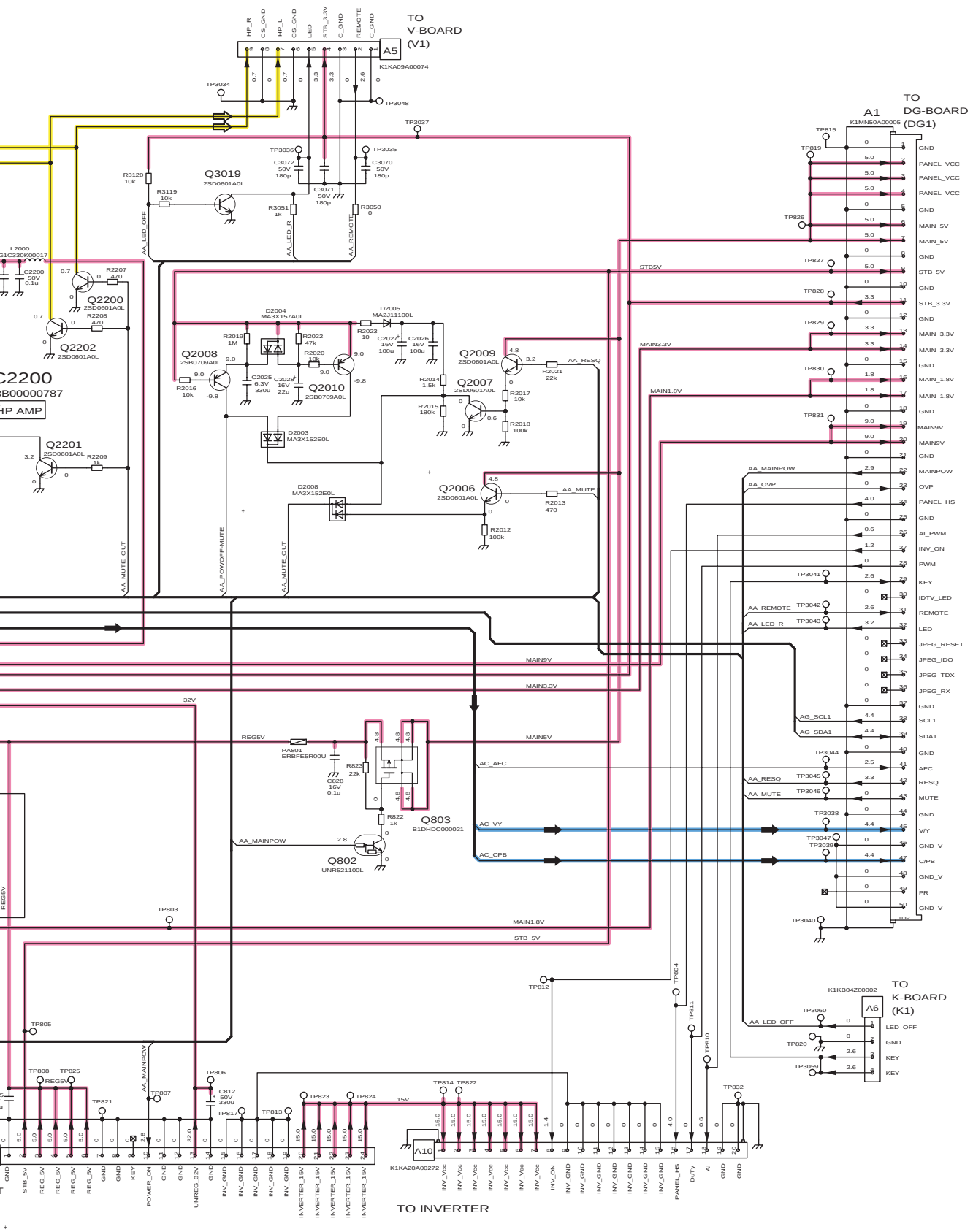
TX-22LX2F/P
A-Board (1 of 2) Schematic Diagram

11.6. A-Board (2 of 2) Schematic Diagram



TX-22LX2F/P
A-Board (2 of 2) Schematic Diagram

8	9	10	11	12

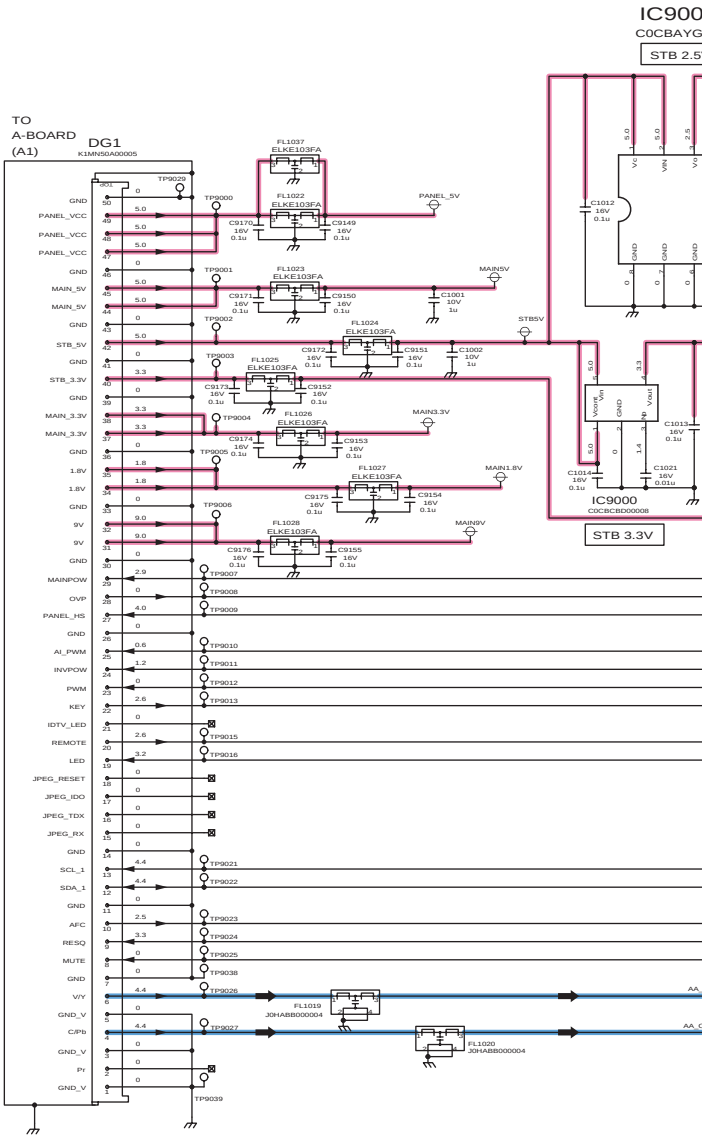


TX-22LX2F/P
A-Board (2 of 2) Schematic Diagram

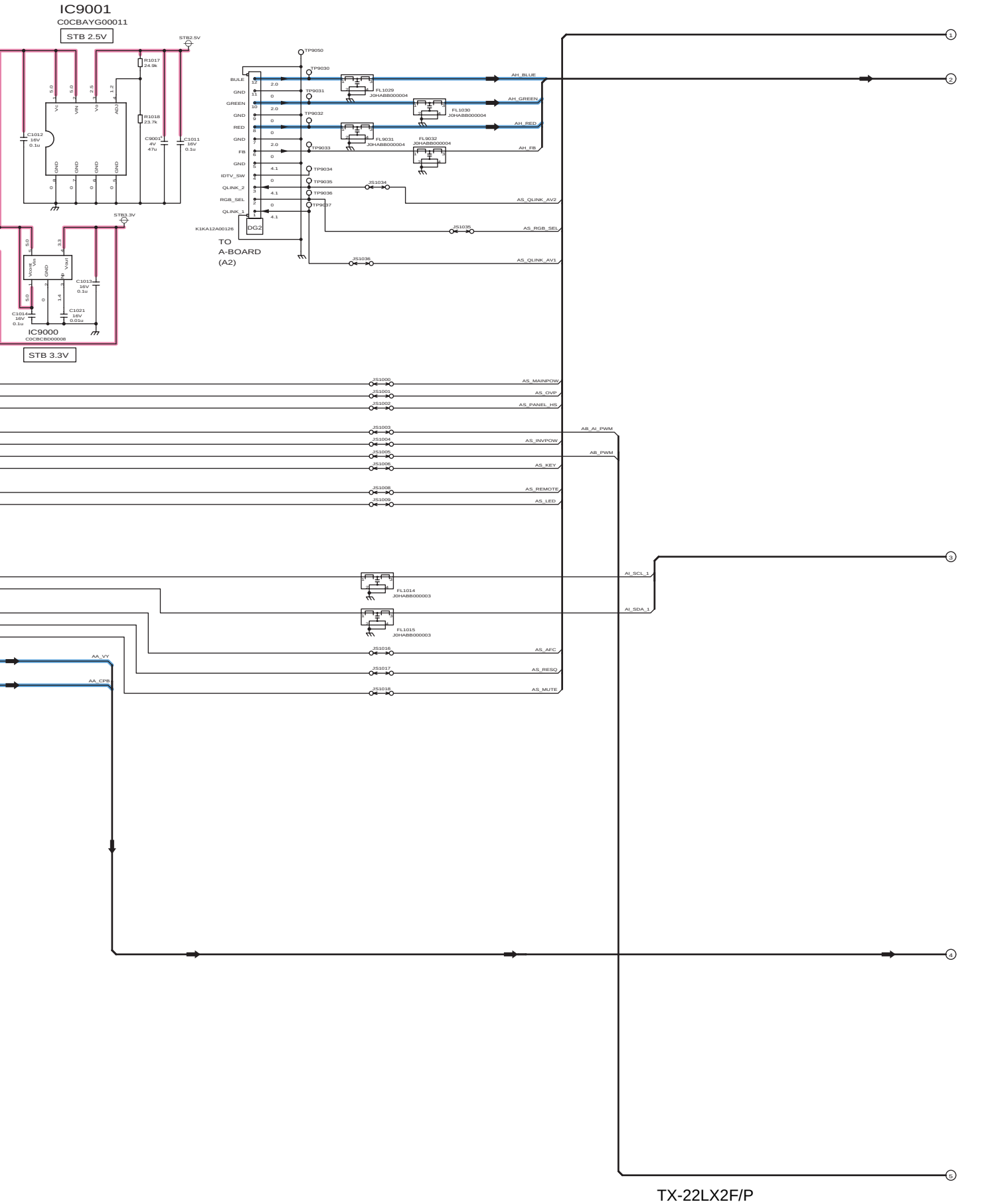
12 13 14 15

11.7. DG-Board (1 of 7) Schematic Diagram

DG-BOARD (1/7)
TNPA3167AB (TX-22LX2F)
TNPA3167AC (TX-22LX2P)



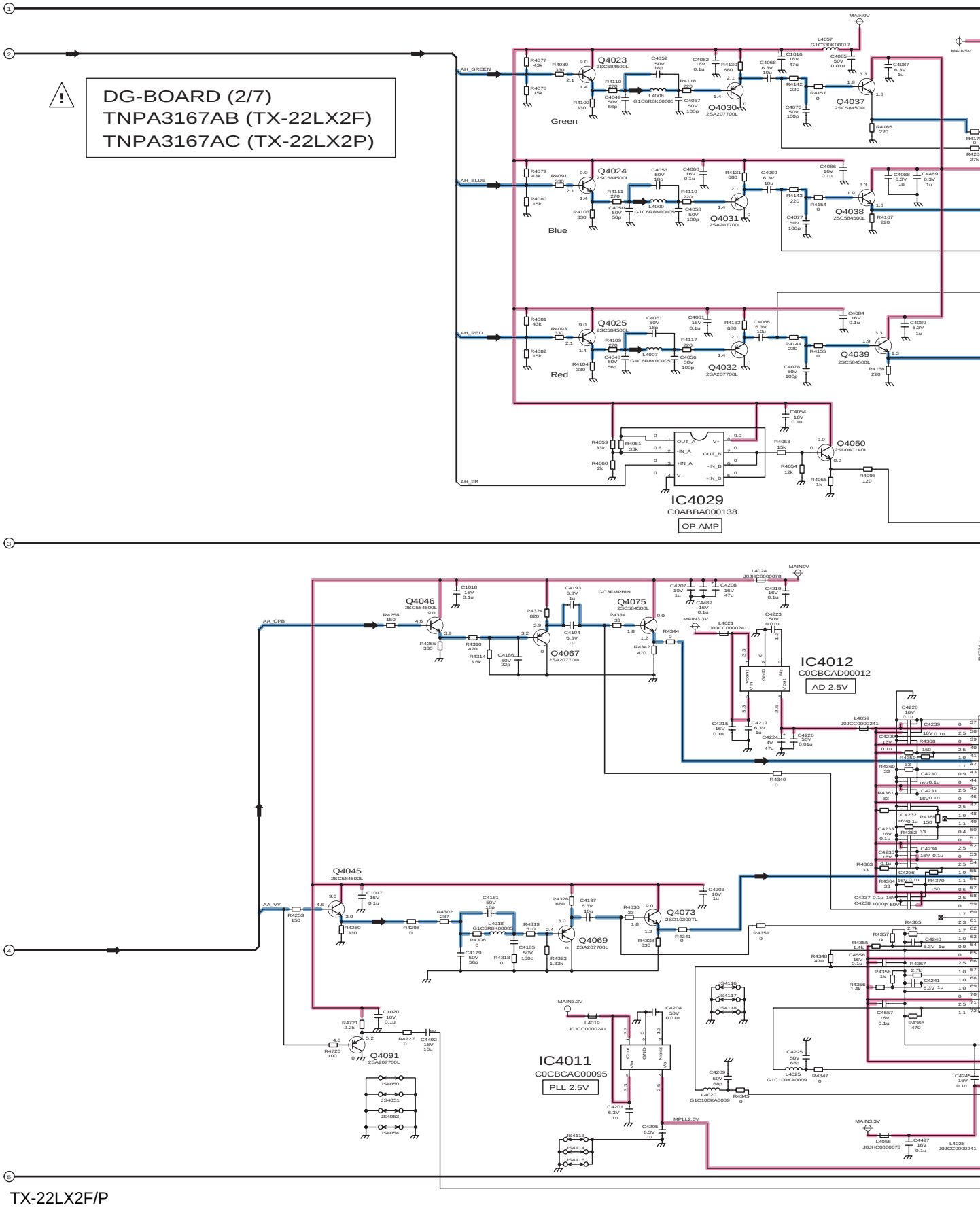
TX-22LX2F/P
DG-Board (1 of 7) Schematic Diagram



TX-22LX2F/P
DG-Board (1 of 7) Schematic Diagram

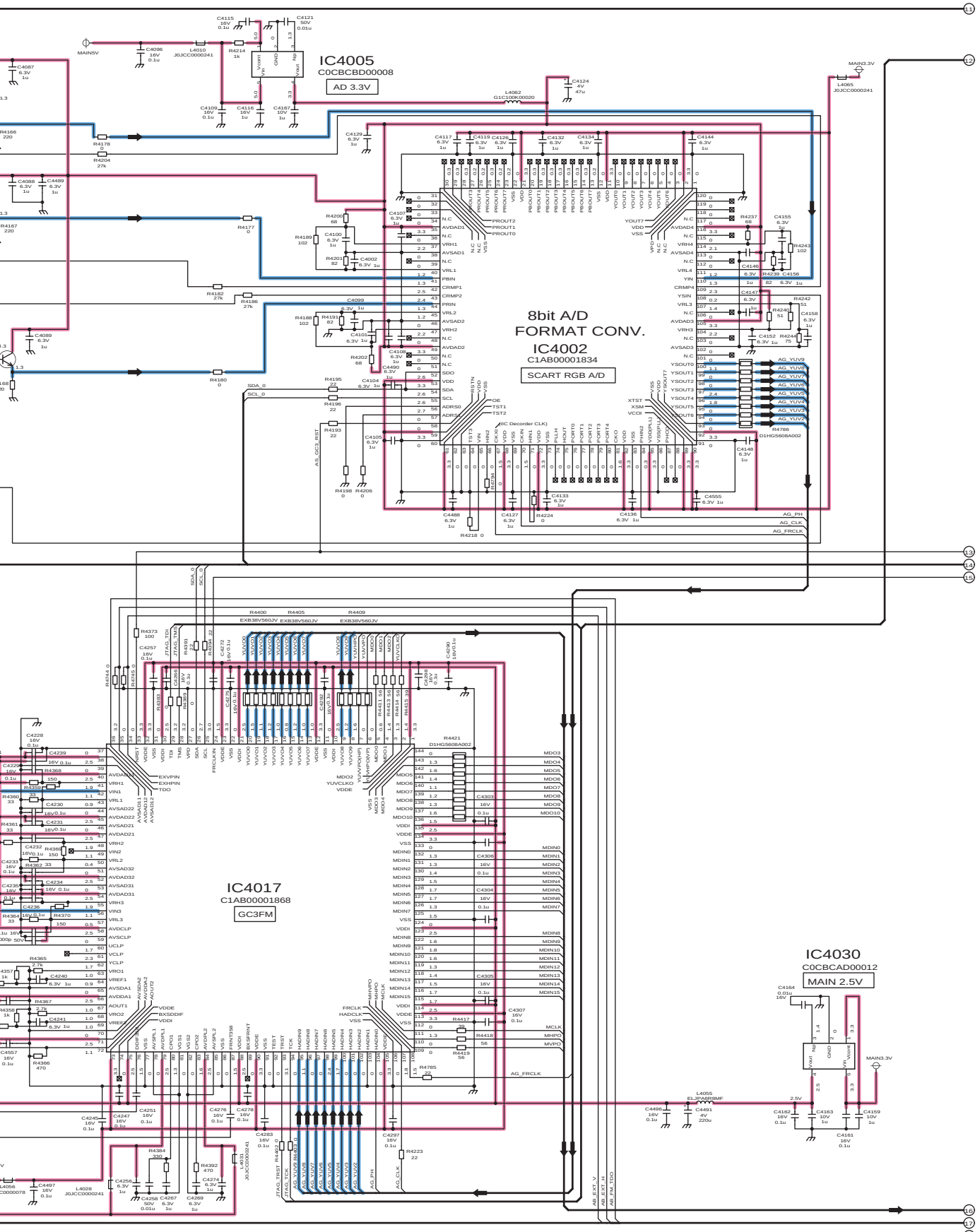
5 6 7 8 9

11.8. DG-Board (2 of 7) Schematic Diagram



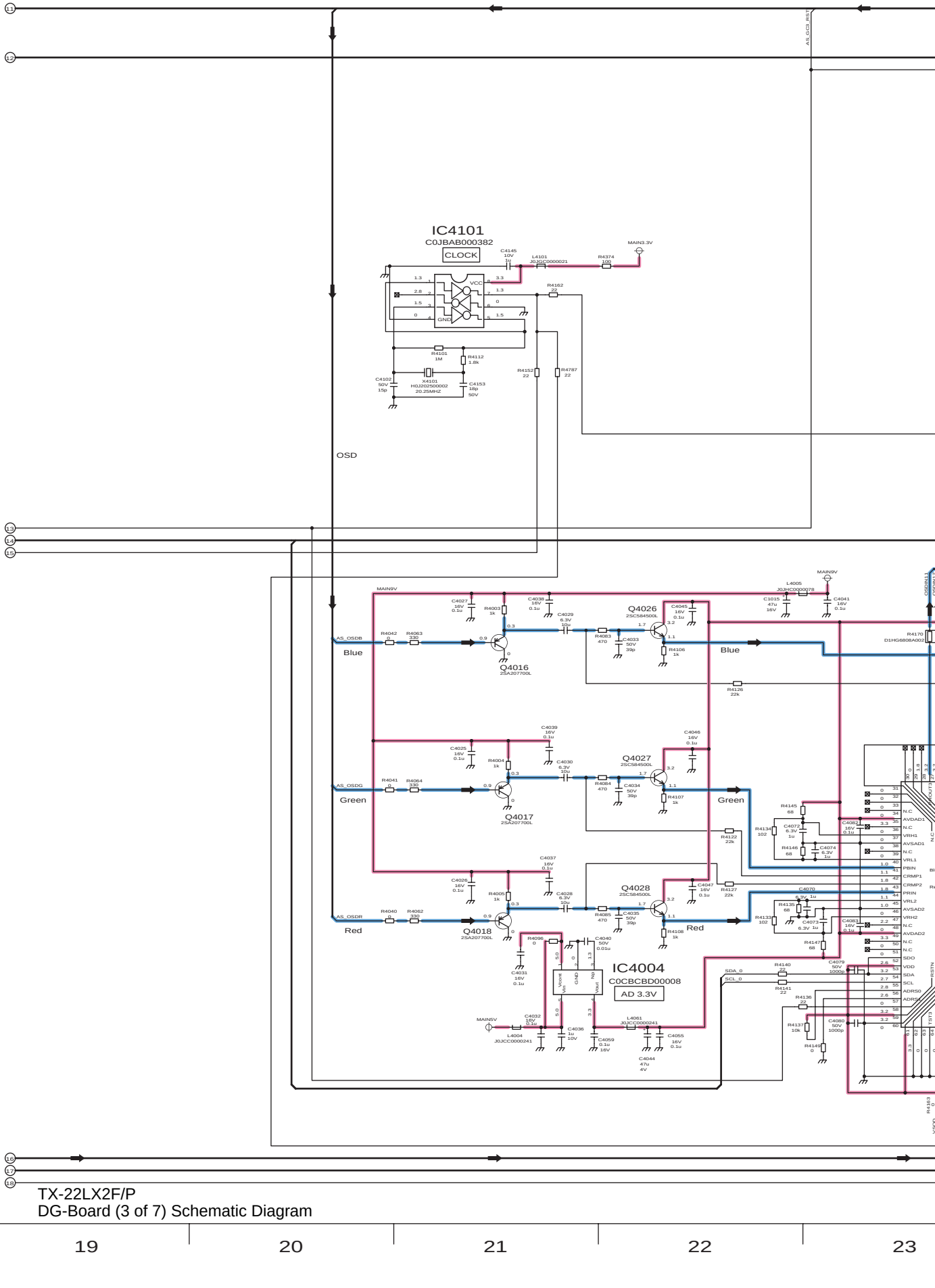
TX-22LX2F/P
DG-Board (2 of 7) Schematic Diagram

10 11 12 13 14

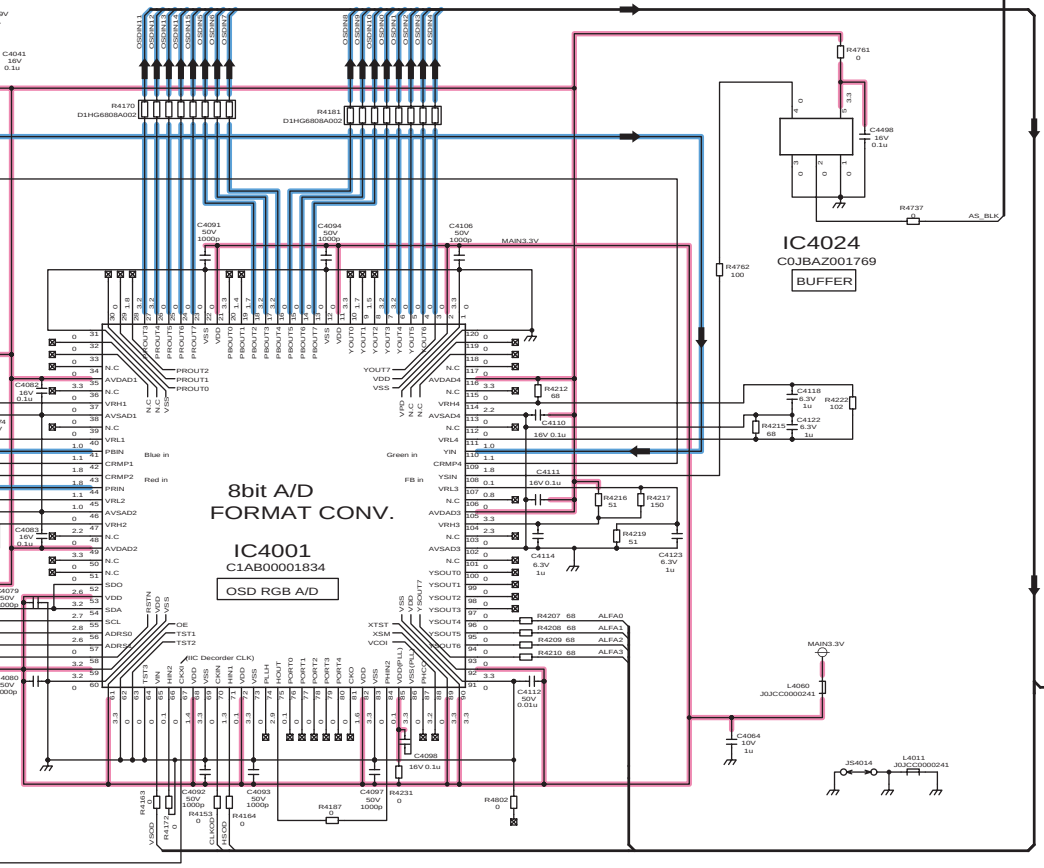


TX-22LX2F/P
DG-Board (2 of 7) Schematic Diagram

11.9. DG-Board (3 of 7) Schematic Diagram

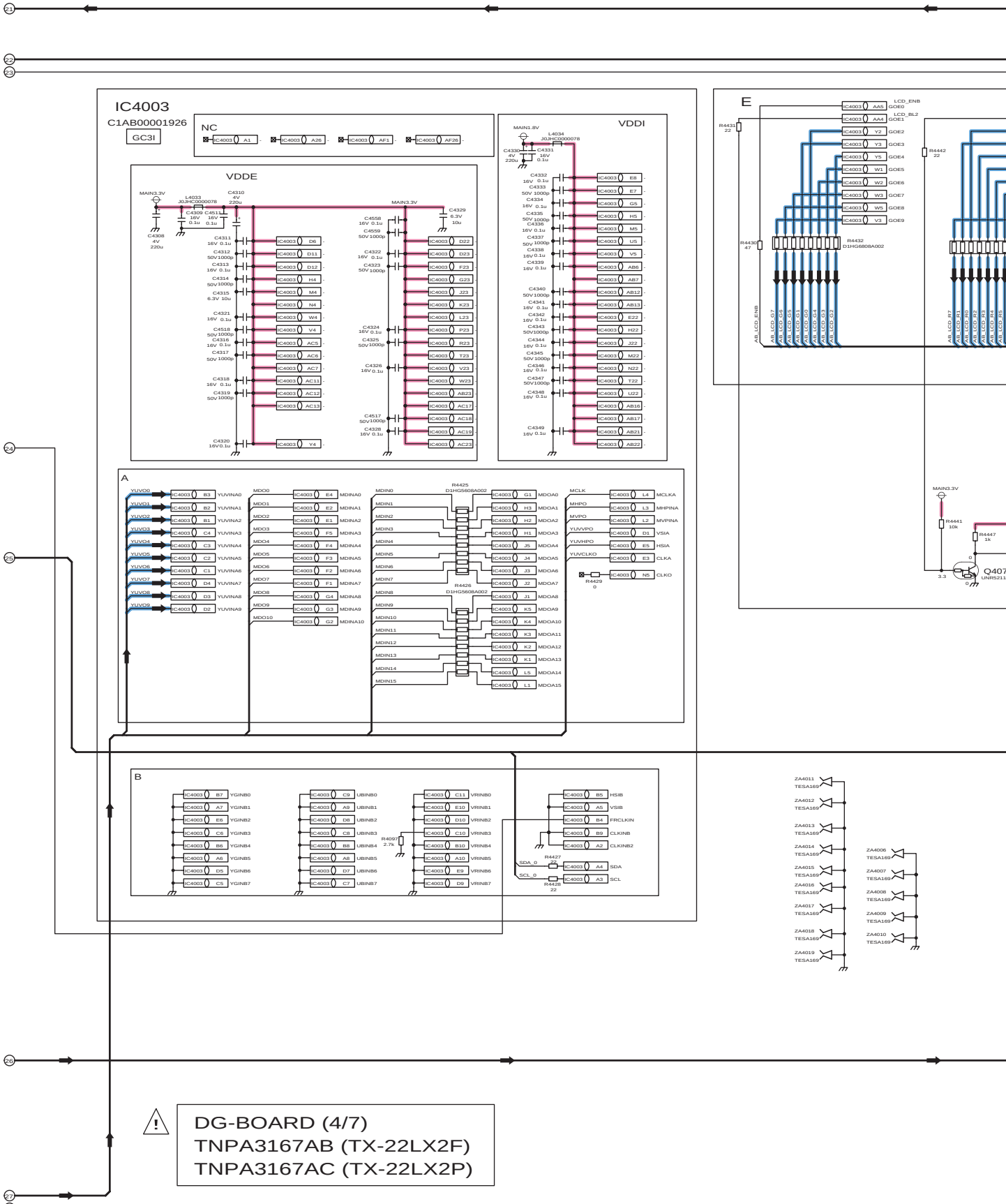


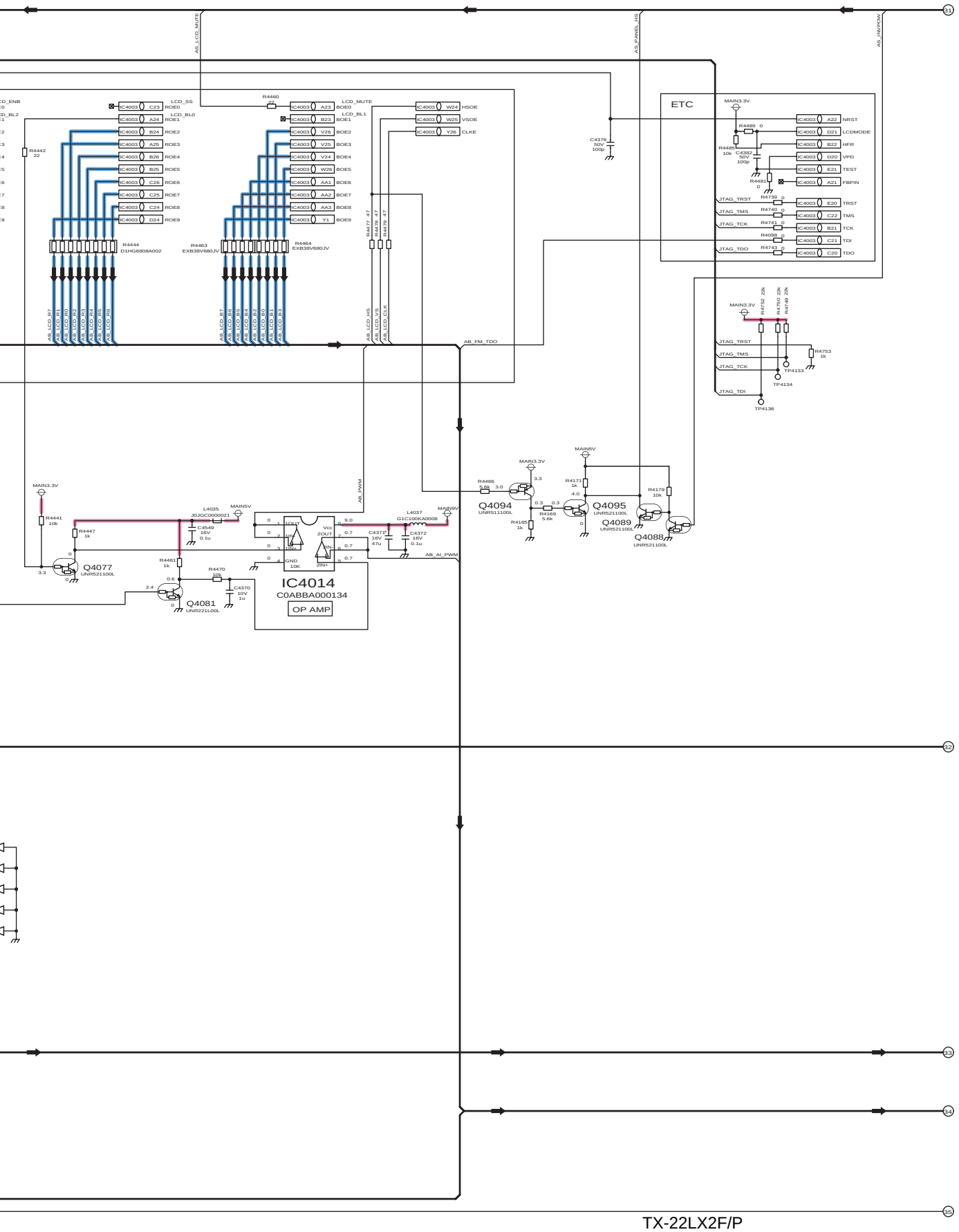
DG-BOARD (3/7)
TNPA3167AB (TX-22LX2F)
TNPA3167AC (TX-22LX2P)



TX-22LX2F/P
DG-Board (3 of 7) Schematic Diagram

11.10. DG-Board (4 of 7) Schematic Diagram

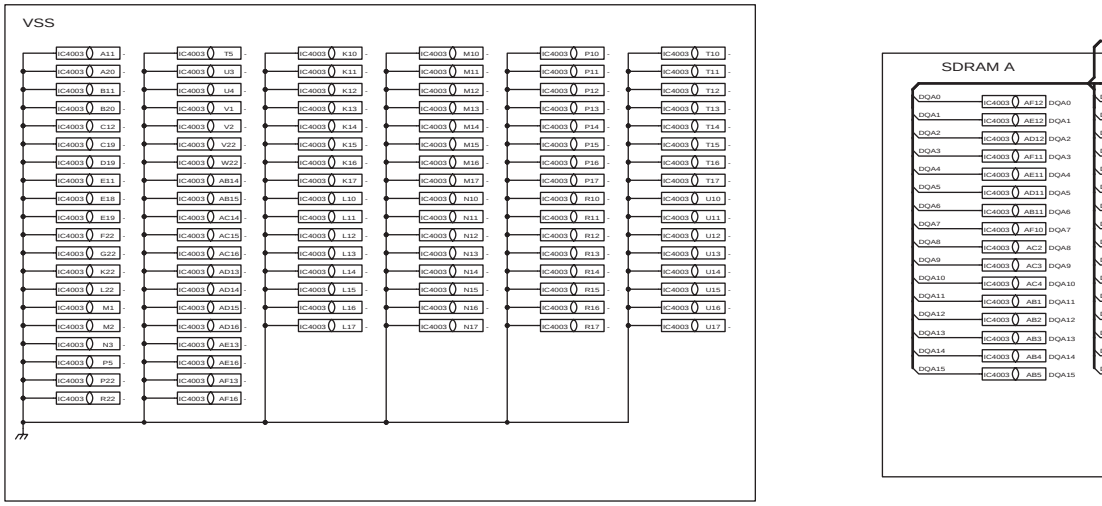


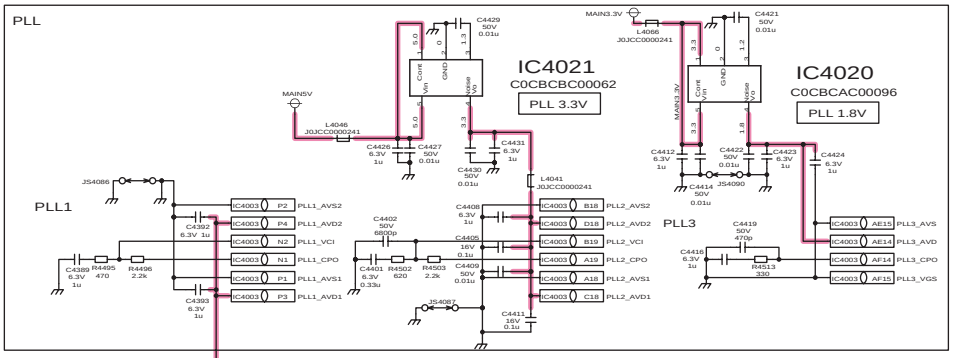


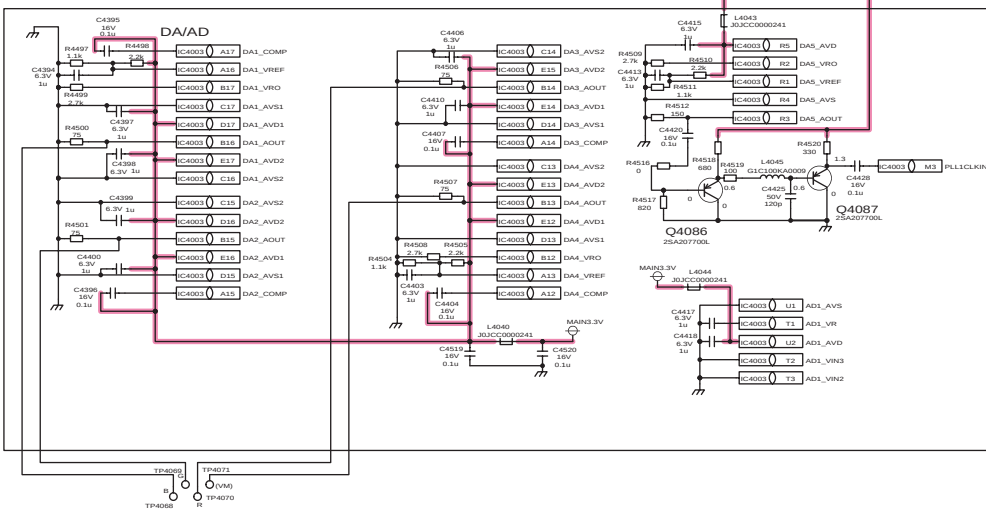
TX-22LX2F/P
DG-Board (4 of 7) Schematic Diagram

32 33 34 35 36

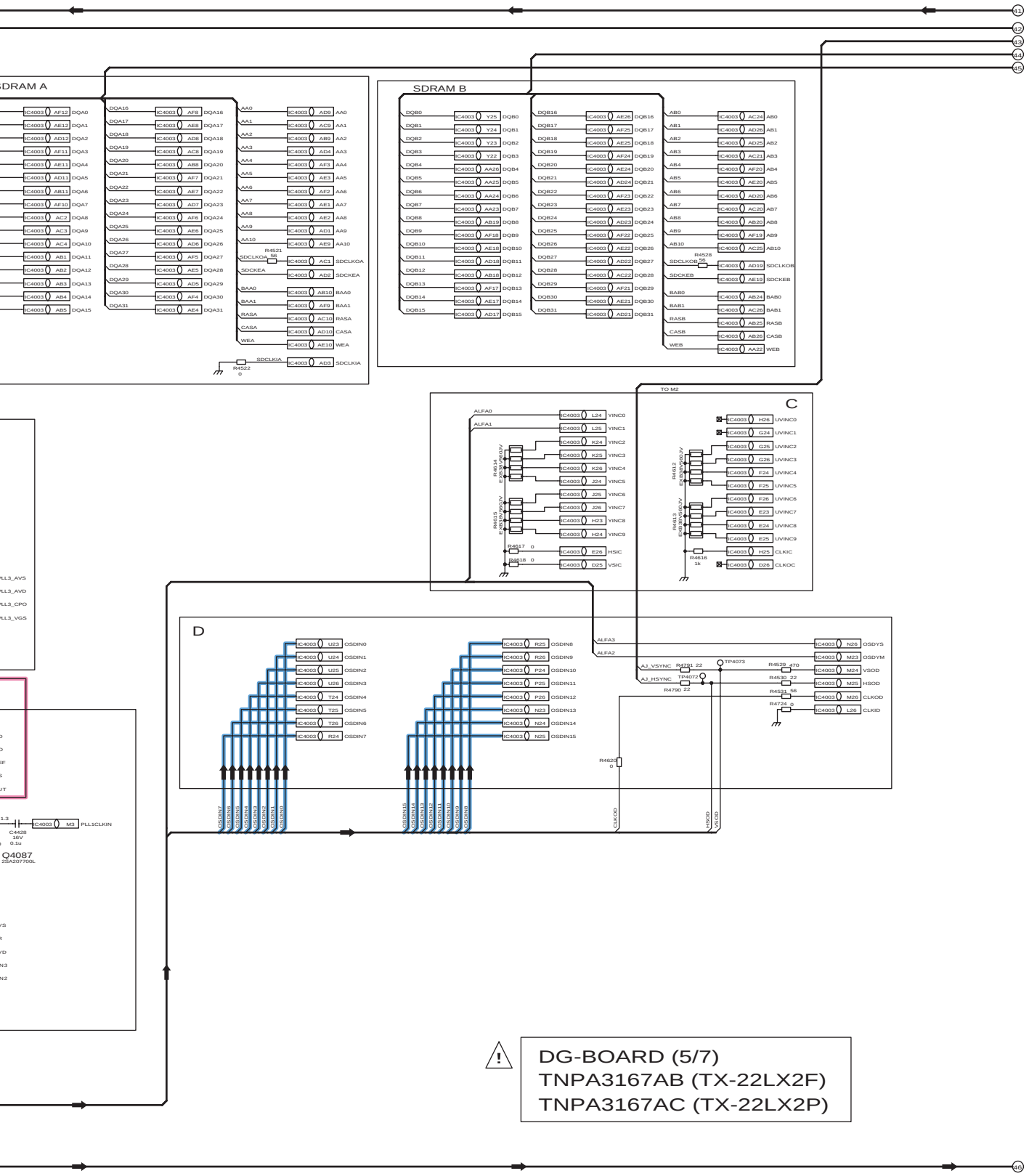
11.11. DG-Board (5 of 7) Schematic Diagram



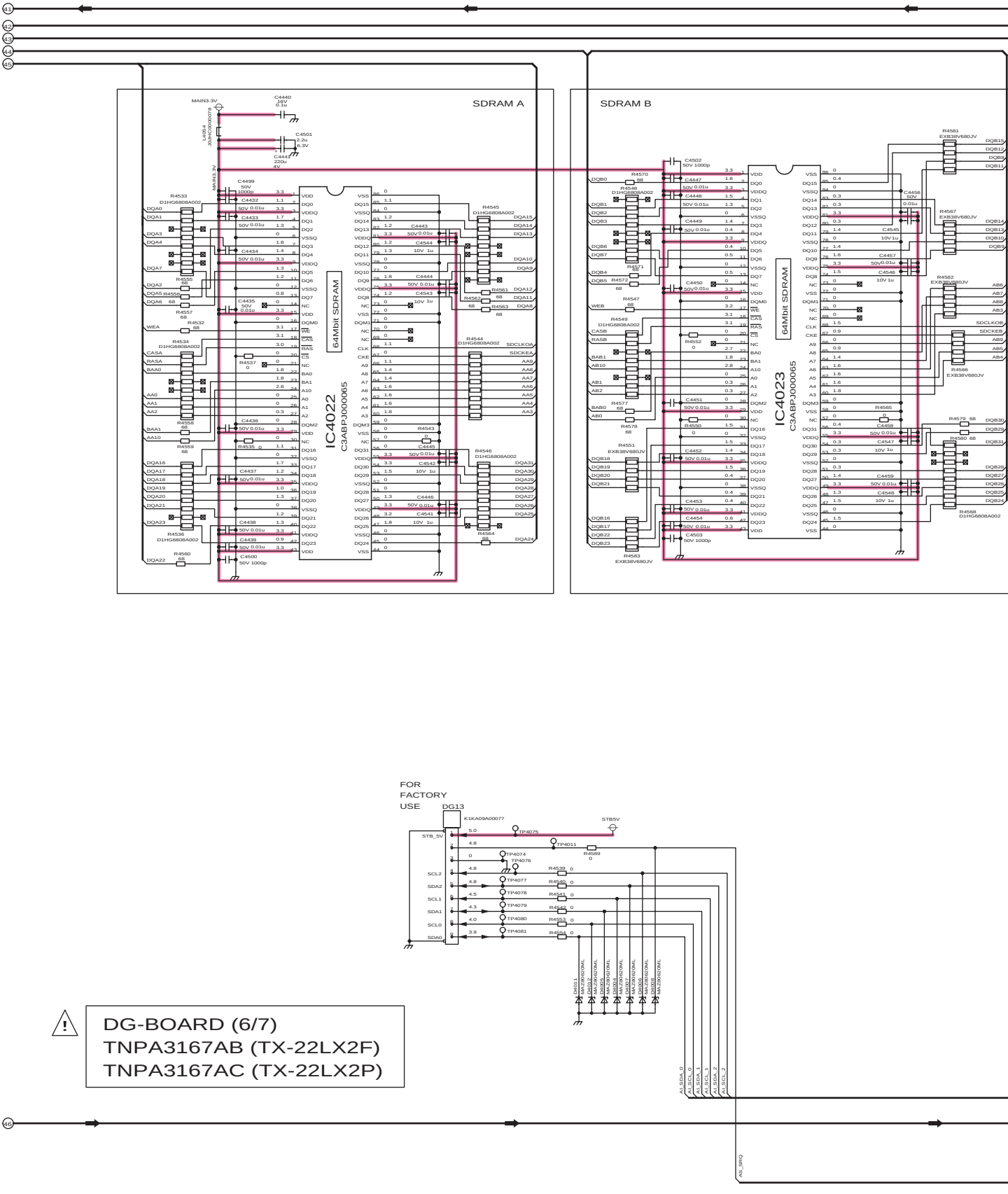




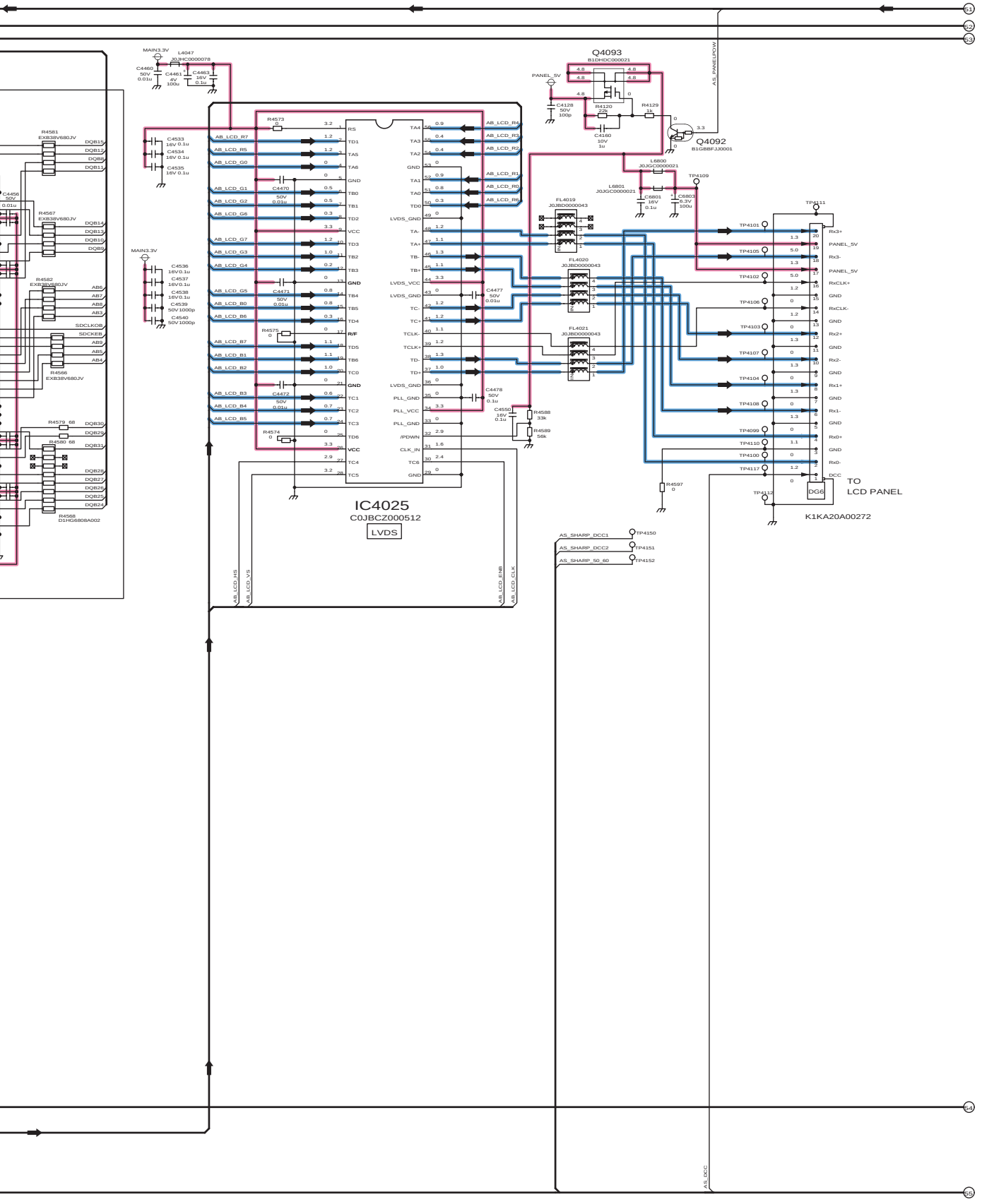
TX-22LX2F/P
DG-Board (5 of 7) Schematic Diagram


SDRAM A
SDRAM B
C
D
TO M2
DG-BOARD (5/7)
TNPA3167AB (TX-22LX2F)
TNPA3167AC (TX-22LX2P)

11.12. DG-Board (6 of 7) Schematic Diagram



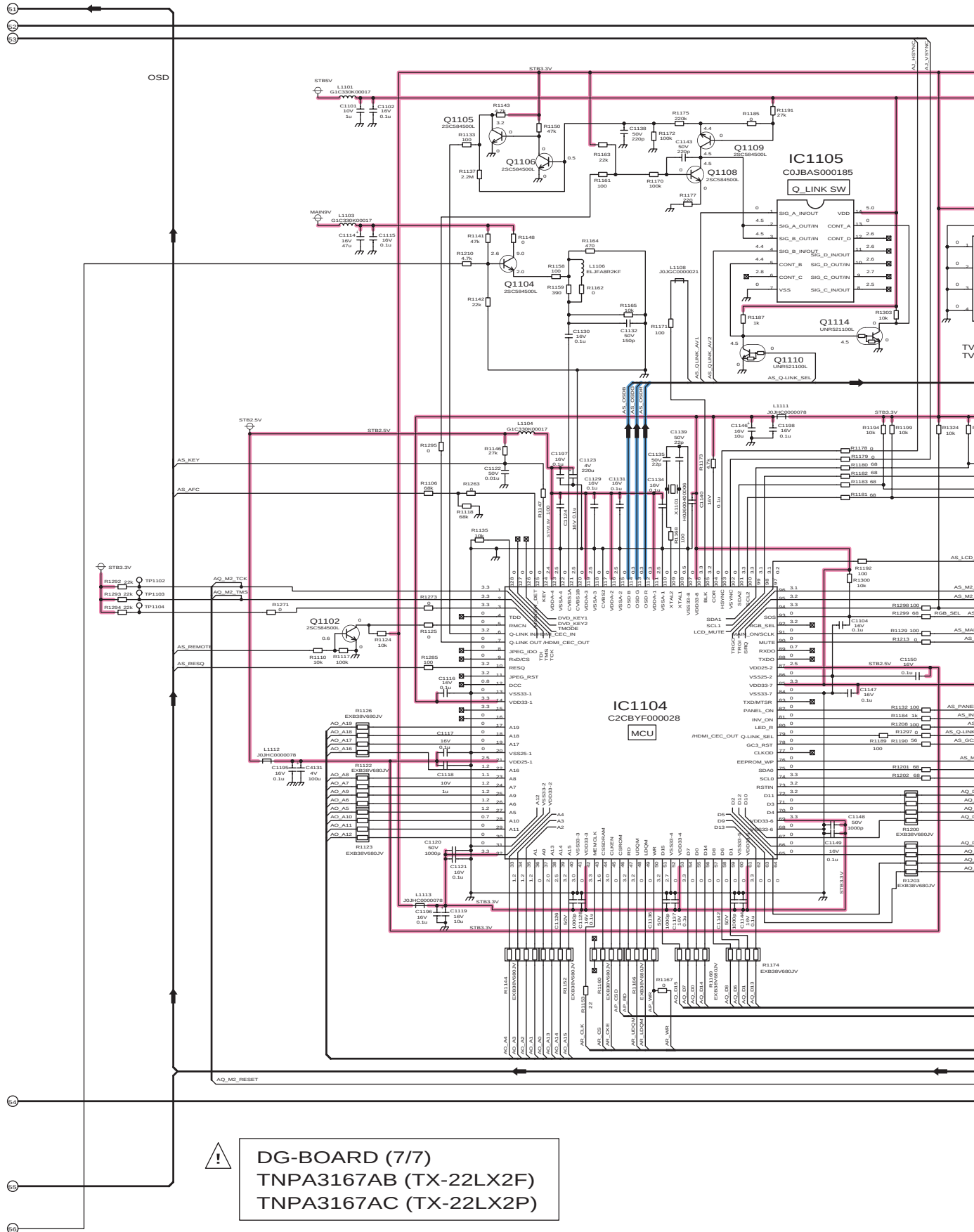
DG-BOARD (6/7)
TNPA3167AB (TX-22LX2F)
TNPA3167AC (TX-22LX2P)



TX-22LX2F/P
DG-Board (6 of 7) Schematic Diagram

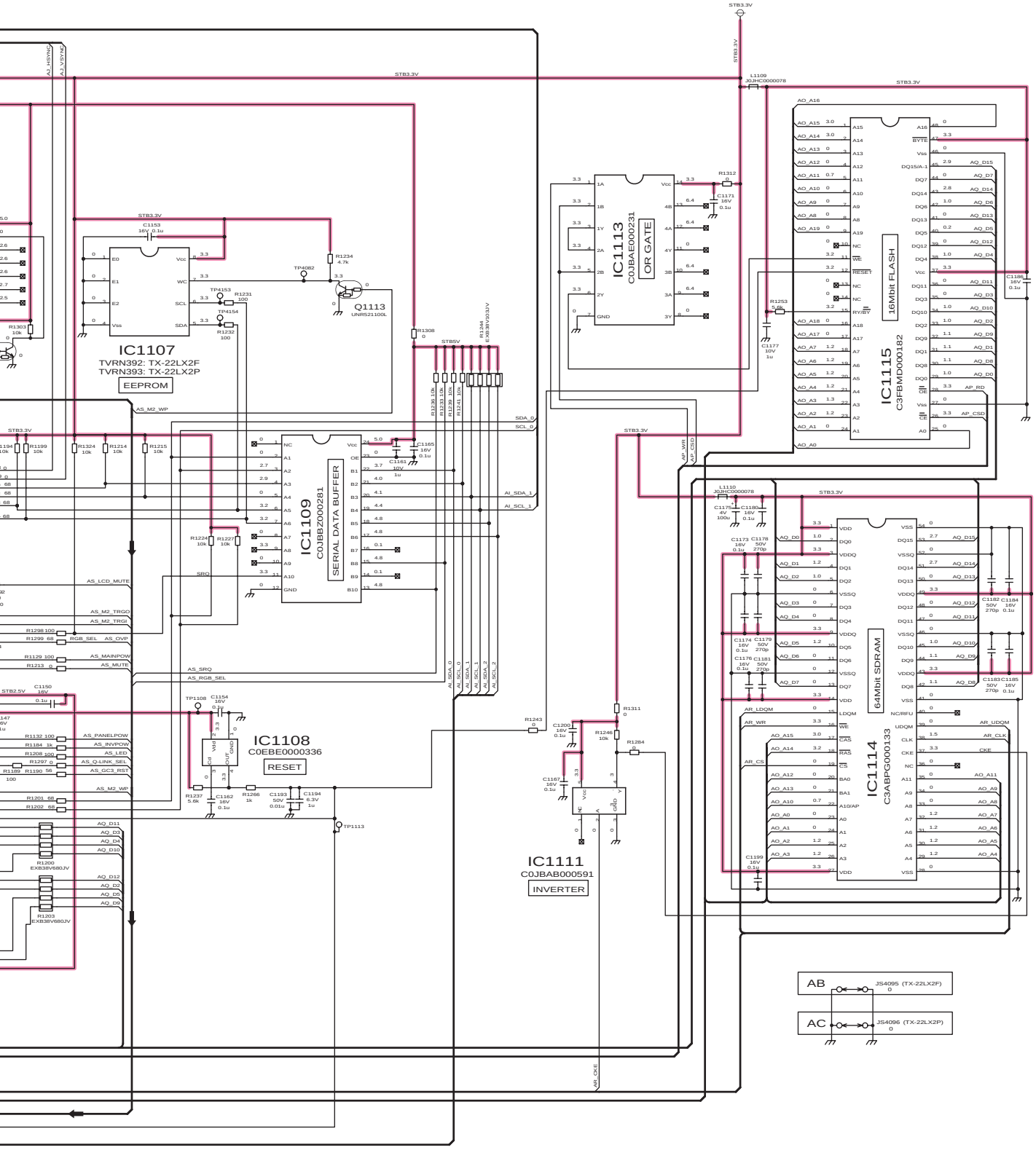
50 51 52 53 54

11.13. DG-Board (7 of 7) Schematic Diagram



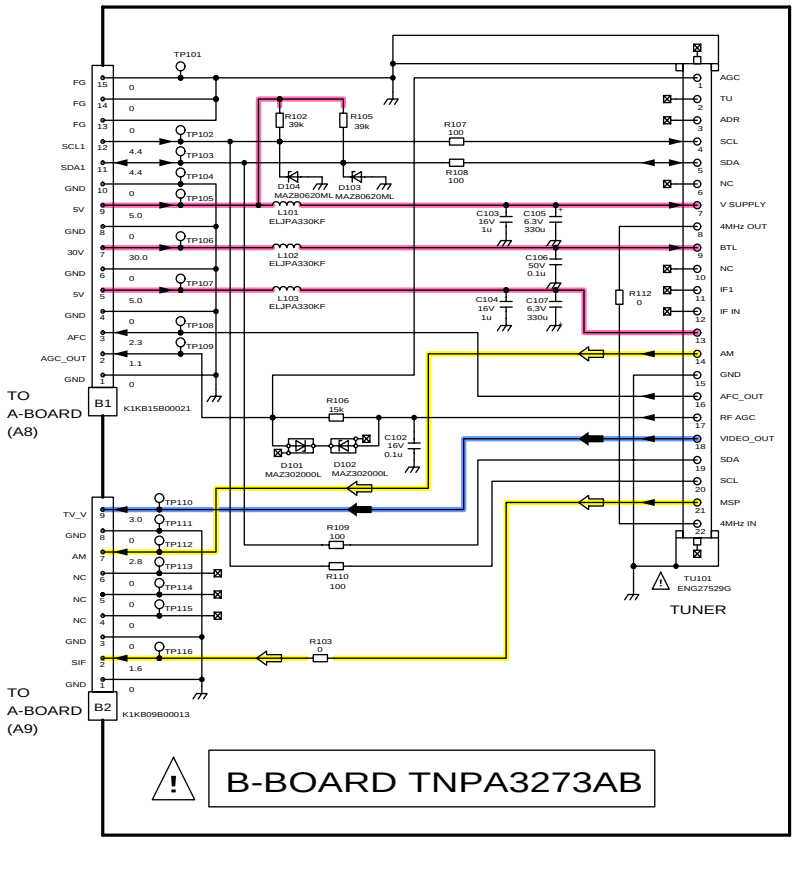
TX-22LX2F/P
DG-Board (7 of 7) Schematic Diagram

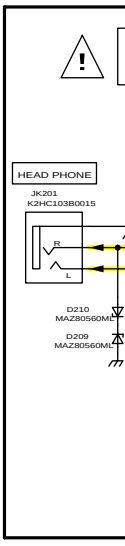
55 56 57 58 59



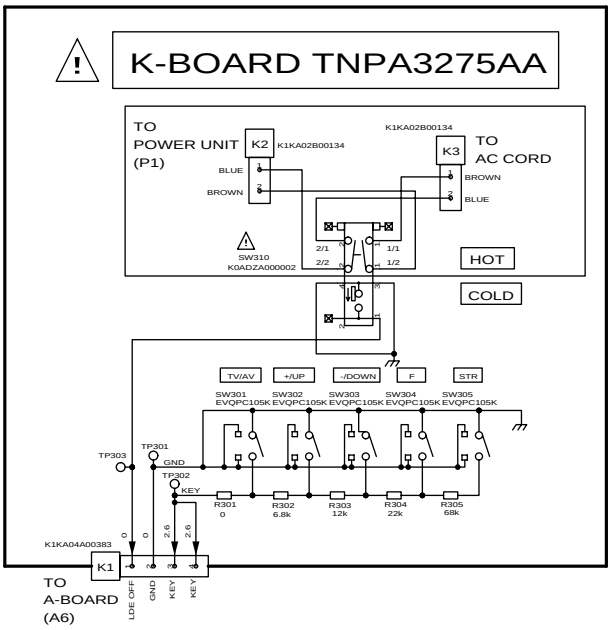
TX-22LX2F/P
DG-Board (7 of 7) Schematic Diagram

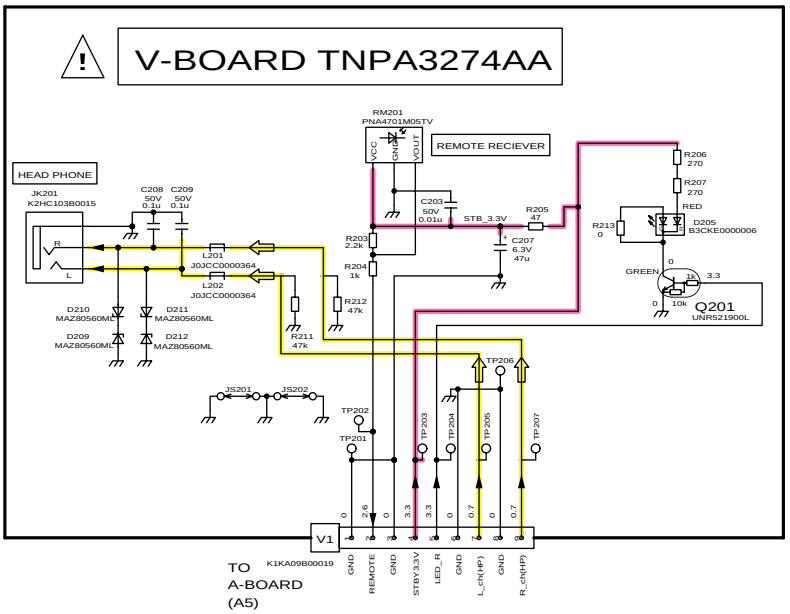
11.14. B, K, and V-Board Schematic Diagram





TX-22LX2F/P
B,K and V-Board Schematic Diagram



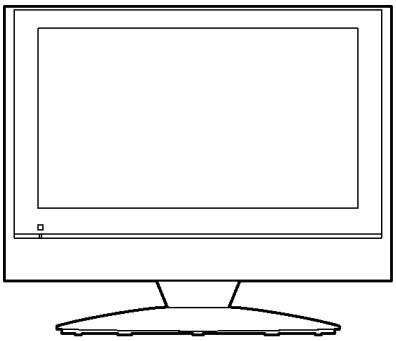


TX-22LX2F/P
B,K and V-Board Schematic Diagram

ORDER NO. PCZ0408012C2

Service Manual

Wide LCD TV



TX-22LX2F
TX-22LX2P

LH35 Chassis

Power Source

AC 220-240V, 50/60Hz

Power Consumption

Average use: 90W

Standby condition: 1.3W

LCD

Wide XGA (1,280 × 720 pixels)

16 : 9 aspect ratio LCD panel

Screen Size

487.7mm(W) × 274.3mm(H)

Sound

Speaker

12cm × 4cm, 2pcs, 16Ω

Audio Output

6W (3W + 3W), 10% THD

Headphones

M3 (3.5 mm) Jack × 1

Receiving Systems/ Band name

PAL B, G, H, SECAM B, G SECAM L/L'

VHF E2 - E12	VHF H1 - H2 (ITALY)
VHF A - H (ITALY)	UHF E21 - E69
CATV (S01 - S05)	CATV S1 - S10 (M1 - M10)
CATV S11 - S20 (U1 - U10)	CATV S21 - S41 (Hyperband)

PAL D, K, SECAM D, K

VHF R1 - R2	VHF R3 - R5
VHF R6 - R12	UHF E21 - E69

PAL 525/60

Playback of NTSC tape from some PAL Video recorders (VCR)

M.NTSC

Playback from M.NTSC Video recorders (VCR)

NTSC (AV input only)

Playback from NTSC Video recorders (VCR)

Aerial-Rear

UHF/VHF

Operating Conditions

Temperature: 5°C-35°C

Humidity: 5%-90% RH (non-condensing)

Connection Terminals

AV1 (Scart connecter)

21 Pin terminal (Audio/Video in, Audio/Video out, RGB in, Q-Link)

AV2 (Scart connecter)

21 Pin terminal (Audio/Video in, Audio/Video out, S-Video in, Q-Link)

AV3

VIDEO

RCA PIN Type × 1

S-VIDEO

Mini DIN 4-pin

AUDIO L-R

RCA PIN Type × 2

Dimensions (W x H x D)

Including TV Stand

592mm × 503.1mm × 260mm

TV Set Only

592mm × 420mm × 99mm

Weight

10kg Net

Note:

Design and Specifications are subject to change without notice. Weight and Dimensions shown are approximate.

Panasonic®

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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1 Safety Precautions

1.1. General Guidelines

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.2. Touch-Current Check

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a measuring network for touch currents between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use Leakage Current Tester (Simpson 228 or equivalent) to measure the potential across the measuring network.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reserve the AC plug in the AC outlet and repeat each of the above measure.
6. The potential at any point (TOUGH CURRENT) expressed as voltage U_1 and U_2, does not exceed the following values:

   For a. c.: U_1 = 35 V (peak) and U_2 = 0.35 V (peak);

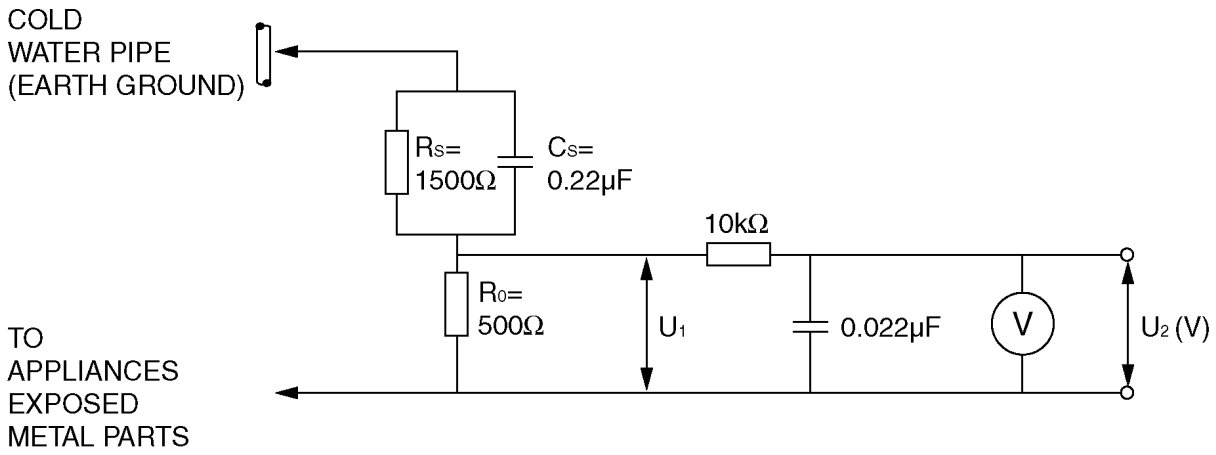
   For d. c.: U_1 = 1.0 V,

   Note:

   The limit value of U_2 = 0.35 V (peak) for a. c. and U_1 = 1.0 V for d. c. correspond to the values 0.7 mA (peak) a. c. and 2.0 mA d. c.

   The limit value U_1 = 35 V (peak) for a. c. correspond to the value 70 mA (peak) a. c. for frequencies greater than 100 kHz.
7. In case a measurement is out of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

Measuring network for TOUCH CURRENTS



Resistance values in ohms (Ω)

V: Voltmeter or oscilloscope
(r.m.s. or peak reading)

Input resistance: ≥ 1 MΩ
Input capacitance: ≤ 200 pF
Frequency range: 15 Hz to 1 MHz and d.c. respectively

NOTE - Appropriate measures should be taken to obtain the correct value in case of non-sinusoidal waveforms.

Figure 1

2 Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as alminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, alminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   Caution

   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise hamless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are imporant for safety.
These parts are marked by ⚠ in the schematic diagrams, Exploded Views and replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

3 About lead free solder (PbF)

Note: Lead is listed as (Pb) in the periodic table of elements.

In the information below, Pb will refer to Lead solder, and PbF will refer to Lead Free Solder.

The Lead Free Solder used in our manufacturing process and discussed below is (Sn+Ag+Cu).

That is Tin (Sn), Silver (Ag) and Copper (Cu) although other types are available.

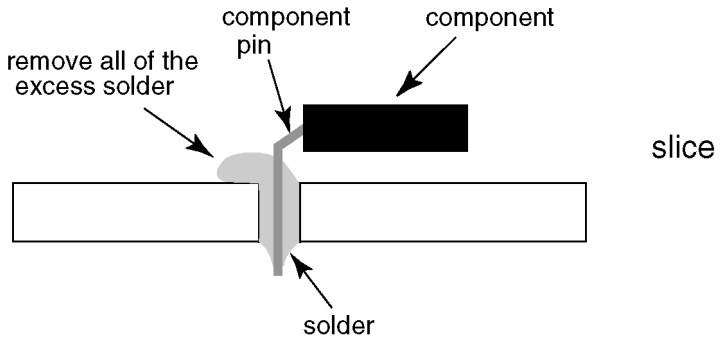
This model uses Pb Free solder in it's manufacture due to environmental conservation issues. For service and repair work, we'd suggest the use of Pb free solder as well, although Pb solder may be used.

PCBs manufactured using lead free solder will have the PbF within a leaf Symbol PbF stamped on the back of PCB.

Caution

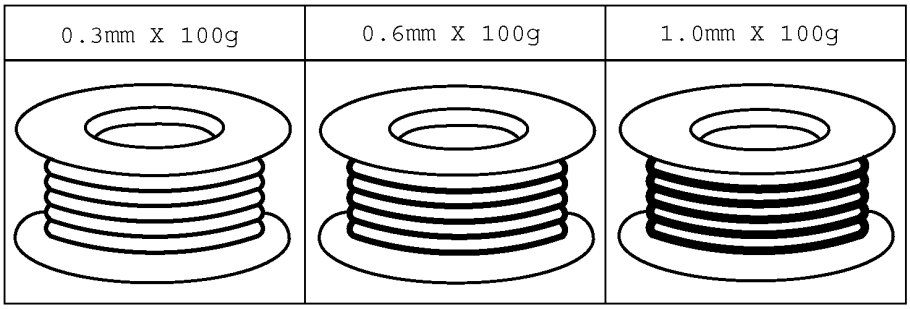
- Pb free solder has a higher melting point than standard solder. Typically the melting point is 50 ~ 70 °F (30~40°C) higher. Please use a high temperature soldering iron and set it to 700 ± 20 °F (370 ± 10 °C).
- Pb free solder will tend to splash when heated too high (about 1100 °F or 600 °C).

  If you must use Pb solder, please completely remove all of the Pb free solder on the pins or solder area before applying Pb solder. If this is not practical, be sure to heat the Pb free solder until it melts, before applying Pb solder.
- After applying PbF solder to double layered boards, please check the component side for excess solder which may flow onto the opposite side. (see figure below)



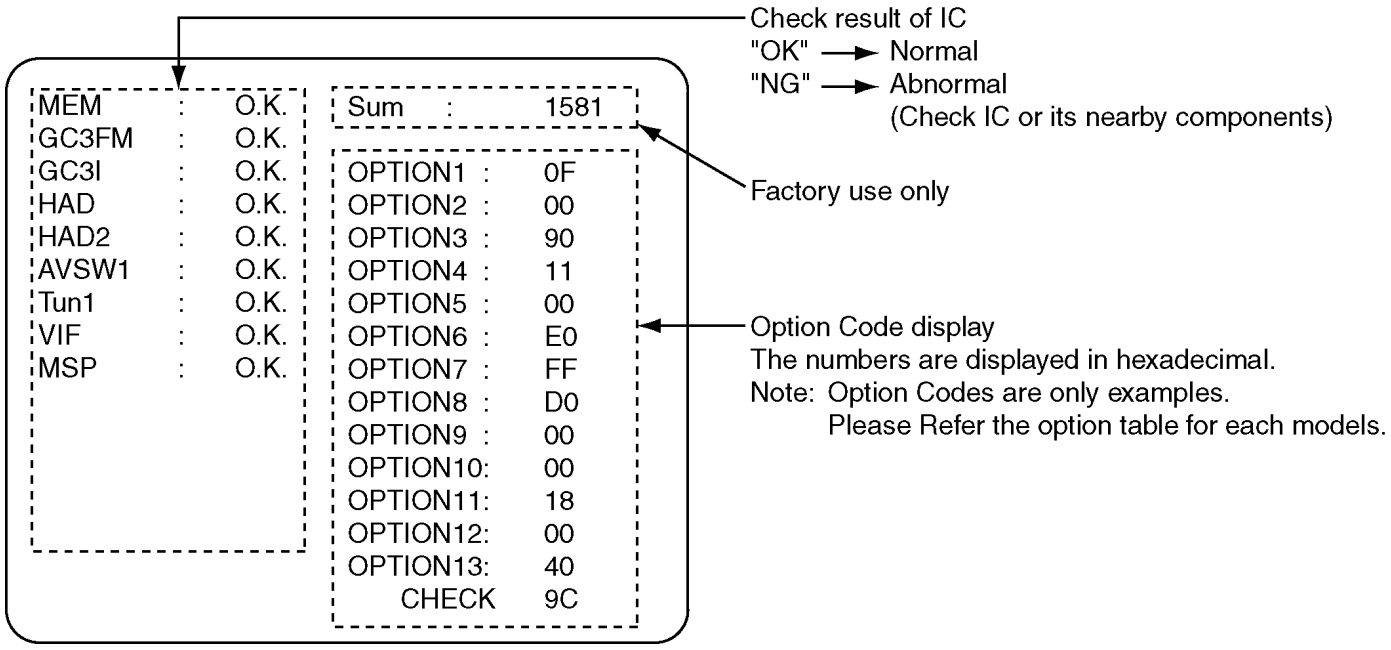
Suggested Pb free solder

There are several kinds of Pb free solder available for purchase. This product uses Sn+Ag+Cu (tin, silver, copper) solder. However, Sn+Cu (tin, copper), Sn+Zn+Bi (tin, zinc, bismuth) solder can also be used.



4 Self Check

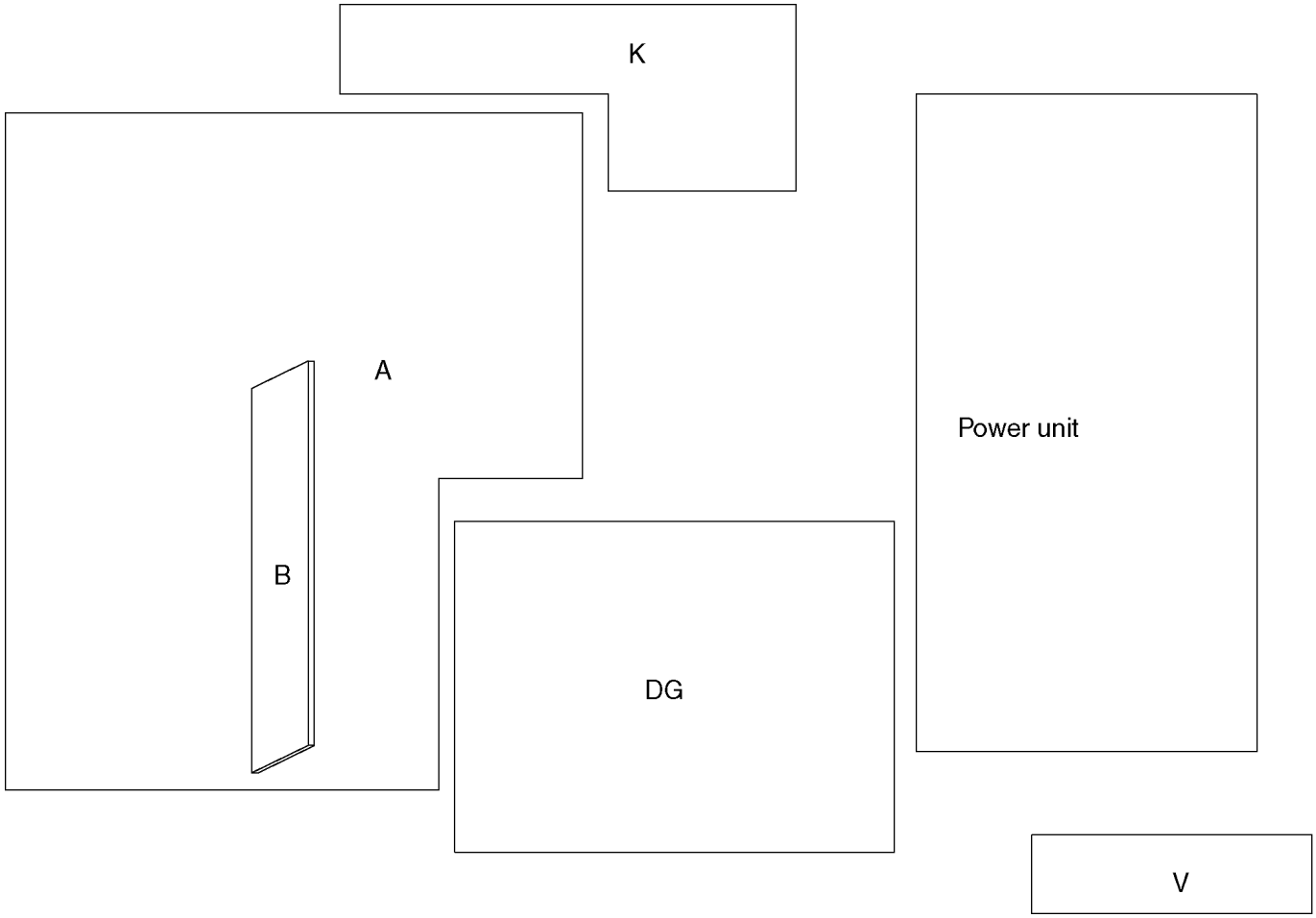
1. Self-Check is used to automatically check the bus lines and hexadecimal code of the TV set.
2. To get into the Self -Check mode press the **Down** (－/∨) button on the customer controls at the front of the set, at the same time pressing the **Recall** button on the remote control, and the screen will show :
3. Turn off the TV to reset JPEG Viewer circuit after SELF-CHECK.



If the CCU ports have been checked and found to be incorrect or not located then “--” will appear in place of “O.K.”.

Display	Ref .No.	Description	P.C.B.
MEM	IC1107	EEPROM	DG-Board
GC3FM	IC4017	Global Core MAIN	DG-Board
GC3I	IC4003	Global Core	DG-Board
HAD	IC4001	SCART RGB A/D Converter	DG-Board
HAD2	IC4002	OSD RGB A/D Converter	DG-Board
AVSW1	IC3001	AV Selector	A-Board
Tun1	TU101	Tuner	B-Board
MSP	IC2501	Stereo Decoder	A-Board

5 Chasis Board Layout

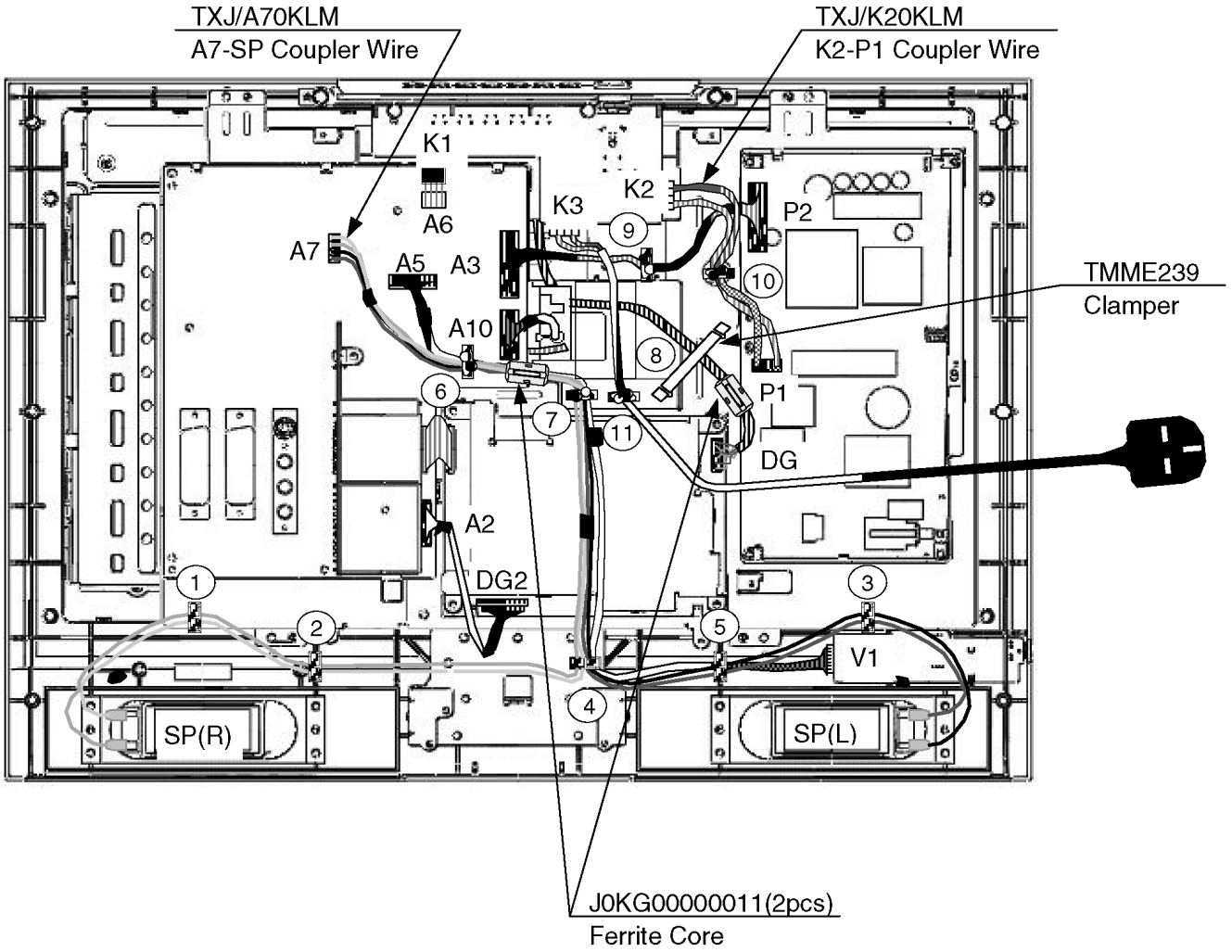


Board Name	Function
A-Board	AV Switch, Audio, AV connector, Regulator
DG-Board	Global Core, A/D Converter, MCU
K-Board	Power Switch, Select Switch
V-Board	Remote Reciever, LED ,Headphone
B-Board	Tuner
Power unit	Power (AC/DC) None serviceable. Power unit should be exchanged for service.

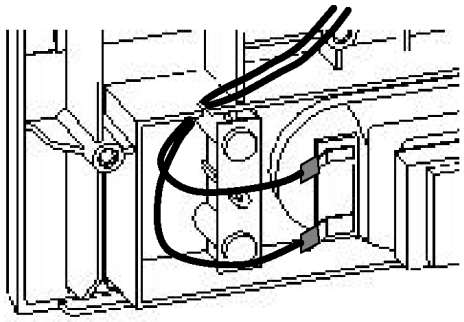
6 Before servicing

6.1. Wire dressing 1

1. Put a ferrite core to the A5-V1 connection wire and A7-Speaker connection wire, between the clampers “6” and “7”, as illustrated below.
2. Put a ferrite core to the DG6-Panel coupler wire, between the wire clamper “8” and DG6 coupler.
3. Make a wire dressing as illustrated below.



4. Put speaker wires into the slit of front cabinet rib as illustrated below.



6.2. Wire dressing 2

<Connection>

A5, A7, A10, DG6, K2, P1, Right speaker + (Pink lead wire), Right speaker - (Sky blue lead wire), Left speaker + (Red lead wire), Left speaker - (Blank lead wire)

<Clamping>

Wire \ Clamper	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪
A5 - V1 connection wire				●	●	●	●				
A7 - R & L Speaker connection wire				●		●	●				
DG6 - LCD Panel connection wire								●			
K2 - P1 connection wire										●	
Right speaker connection wire	●	●									
Left speaker connection wire			●		●						
Power cord											●

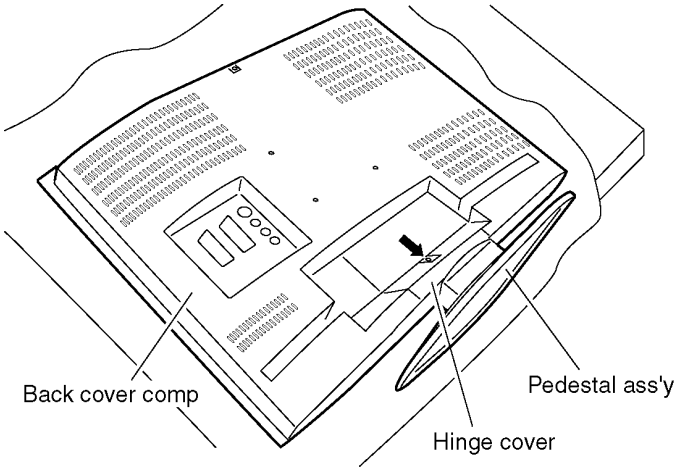
Notes:

1. Connect every connector surely.
2. Mannage wires not to touch any sharp edge of the metal parts.
3. manage wires not to have too much tension.

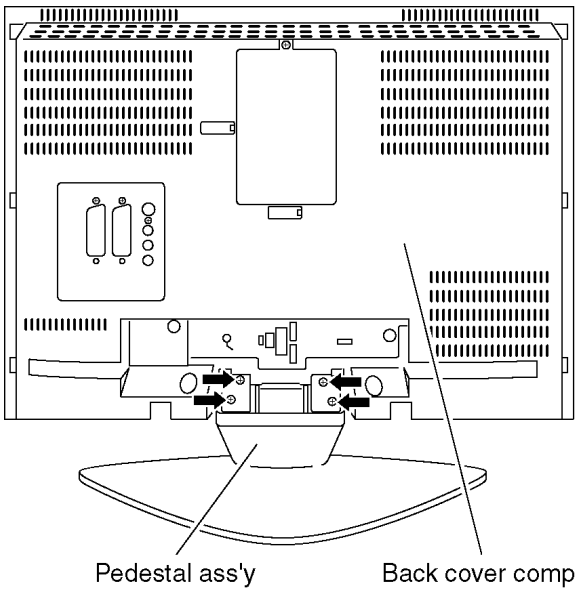
7 Disassembly for service

7.1. Pedestal ass´y

1. Lay down the main unit so that the back cover comp faces upward.
2. Remove the fixing screw (1pcs ➡).
3. Remove the hinge cover.

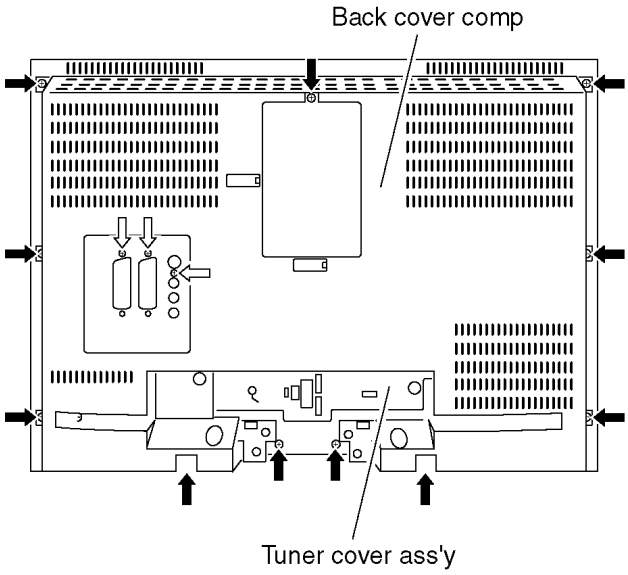


4. Remove the fixing screws (4pcs ➡).
5. Remove the pedestal ass´y.



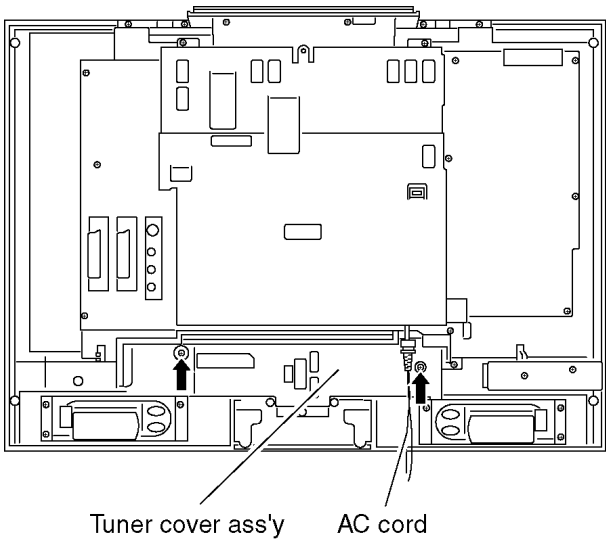
7.2. Back cover comp

1. Remove the pedestal ass´y. (See 7.1.)
2. Remove the fixing screws (11pcs ➡ and 3pcs ⇨).
3. Remove the back cover comp.



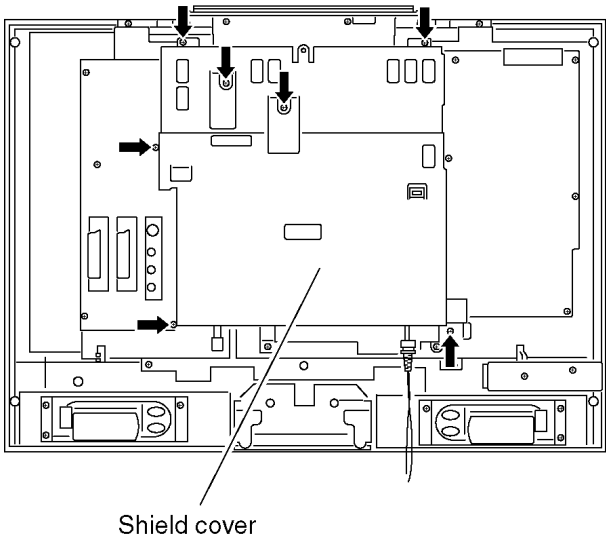
7.3. Tuner cover ass'y

1. Remove the back cover comp. (See 7.2.)
2. Remove the AC cord.
3. Remove the fixing screws (2pcs ➡).
4. Remove the tuner cover ass'y.



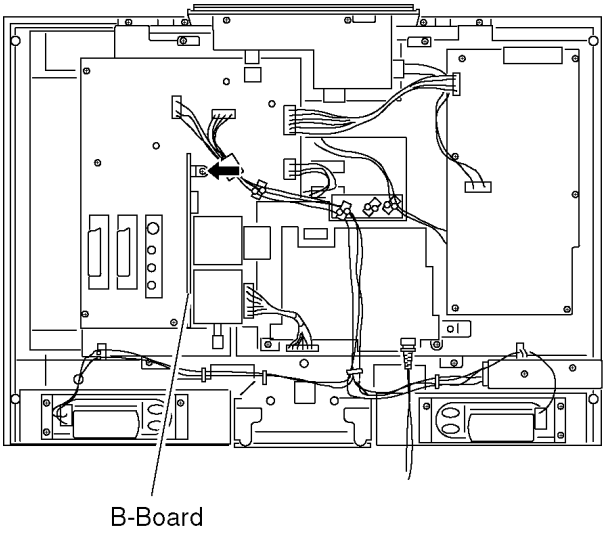
7.4. Shield cover

1. Remove the back cover comp (See 7.2.) and the tuner cover ass'y. (See 7.3.)
2. Remove the fixing screws (7pcs ➡).
3. Remove the shield cover.



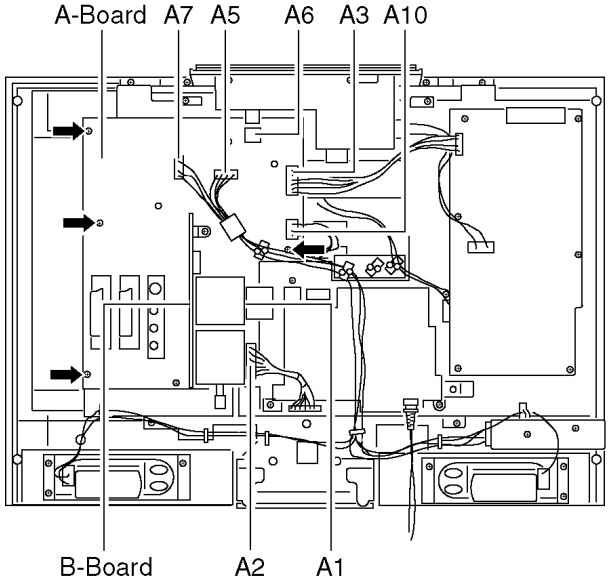
7.5. B-Board

1. Remove the shield cover. (See 7.4.)
2. Remove the fixing screw (1pcs ➡).
3. Remove the B-Board.



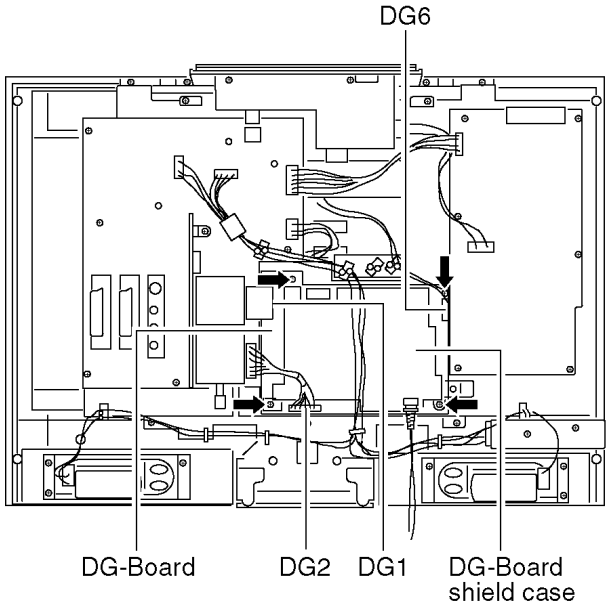
7.6. A-Board

1. Remove the shield cover. (See 7.4.)
2. Remove the B-Board. (See 7.5.)
3. Disconnect the couplers (A2, A3, A5, A6, A7 and A10) and the flexible cable (A1).
4. Remove the fixing screws (4pcs ➡).
5. Remove the A-Board.



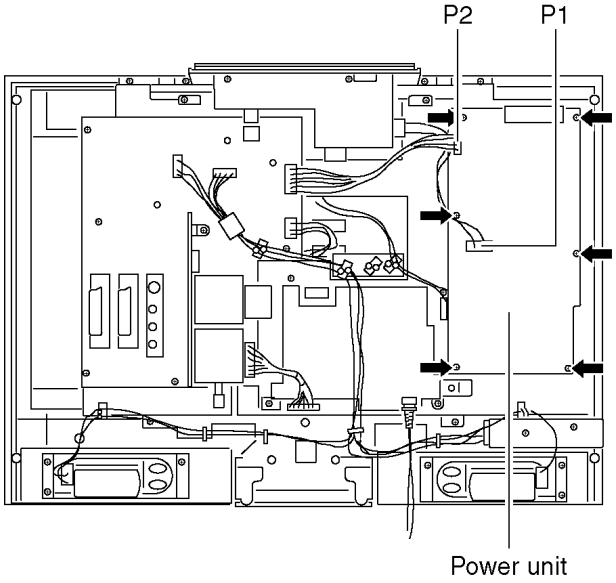
7.7. DG-Board

1. Remove the shield cover. (See 7.4.)
2. Unlock the cable clampers to free the cable.
3. Disconnect the couplers (DG1 and DG2) and the flexible cable (DG6).
4. Remove the fixing screws (4pcs ➡).
5. Remove the DG-Board shield case.
6. Remove the DG-Board.



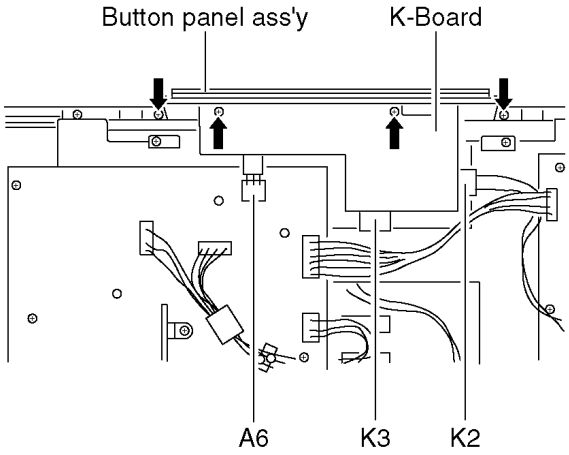
7.8. Power unit

1. Remove the shield cover. (See 7.4.)
2. Disconnect the couplers (P1 and P2).
3. Remove the fixing screws (6pcs ➡).
4. Remove the Power unit.



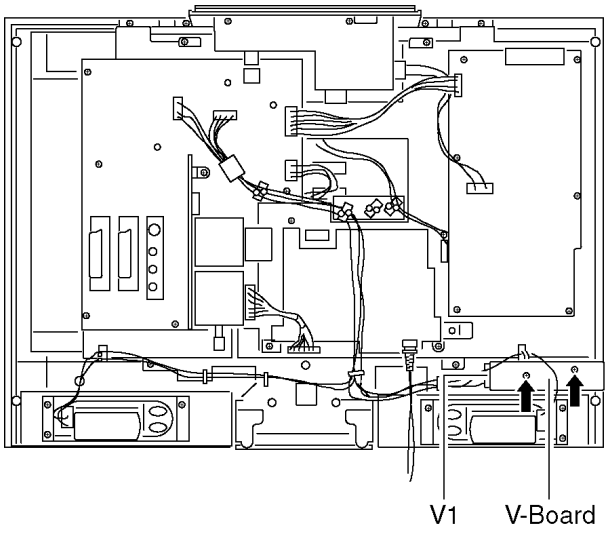
7.9. K-Board

1. Remove the shield cover. (See 7.4.)
2. Remove the fixing screws (4pcs ➡).
3. Remove the button panel ass´y.
4. Disconnect the couplers (K2, K3 and A6).
5. Remove the K-Board.



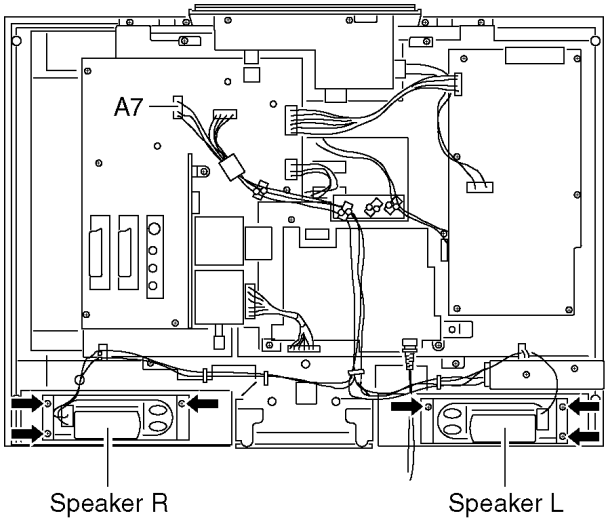
7.10. V-Board

1. Remove the shield cover. (See 7.4.)
2. Remove the fixing screws (2pcs ➡).
3. Disconnect the coupler (V1).
4. Remove the V-Board.



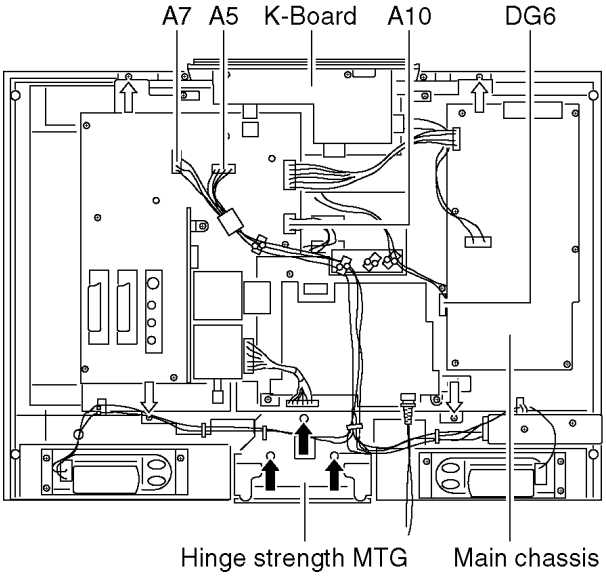
7.11. Speaker (left and right)

1. Remove the V-Board.
2. Disconnect the coupler (A7).
3. Remove the fixing screws (6pcs ➡).
4. Remove the speaker (left and right).

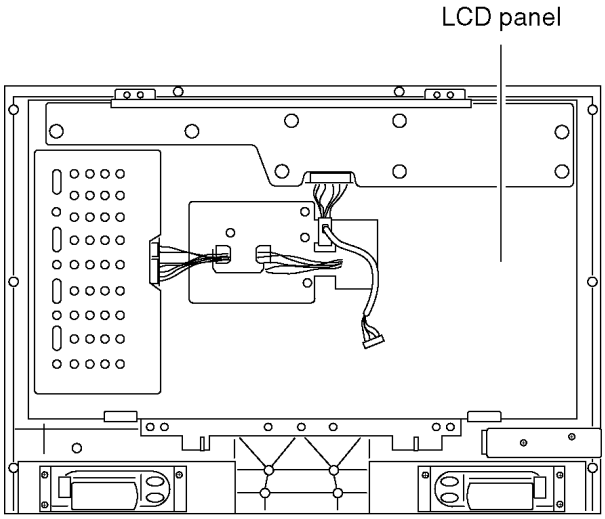


7.12. Main chassis and LCD panel

1. Remove the shield cover. (See 7.4.)
2. Remove the K-Board. (See 7.9.)
3. Unlock the cable clampers to free the cable.
4. Disconnect the couplers (A5, A7, A10 and DG6).
5. Remove the fixing screws (3pcs ➡).
6. Remove the hinge strength MTG.
7. Remove the fixing screws (4pcs ⇨).
8. Remove the main chassis.



9. Remove the LCD panel.



8 Service Mode Function

MPU controls the functions switching for each IICs through IIC bus in this chassis. The following setting and adjustment can be adjusted by remote control in Service Mode.

8.1. How to enter SERVICE 1

1. In main menu, move to choose sound menu, set BASS to MAXIMUM, and set TREBLE to MINIMUM.
2. Simultaneously press **INDEX** button on remote control and **DOWN** button [-/--] on the TV set.

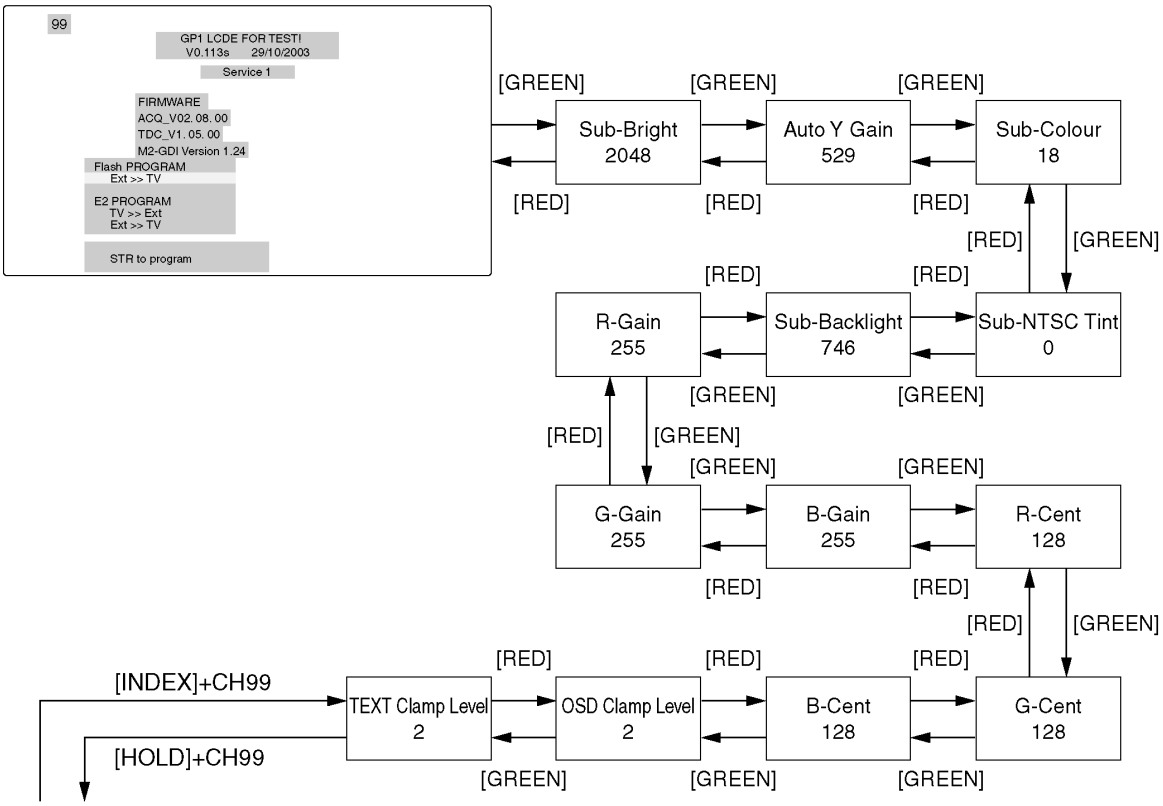
8.2. How to enter SERVICE 2

1. Select the TEXT Clamp Level (service 1).
2. Set the channel to CH99.
3. Press HOLD button on remote control.

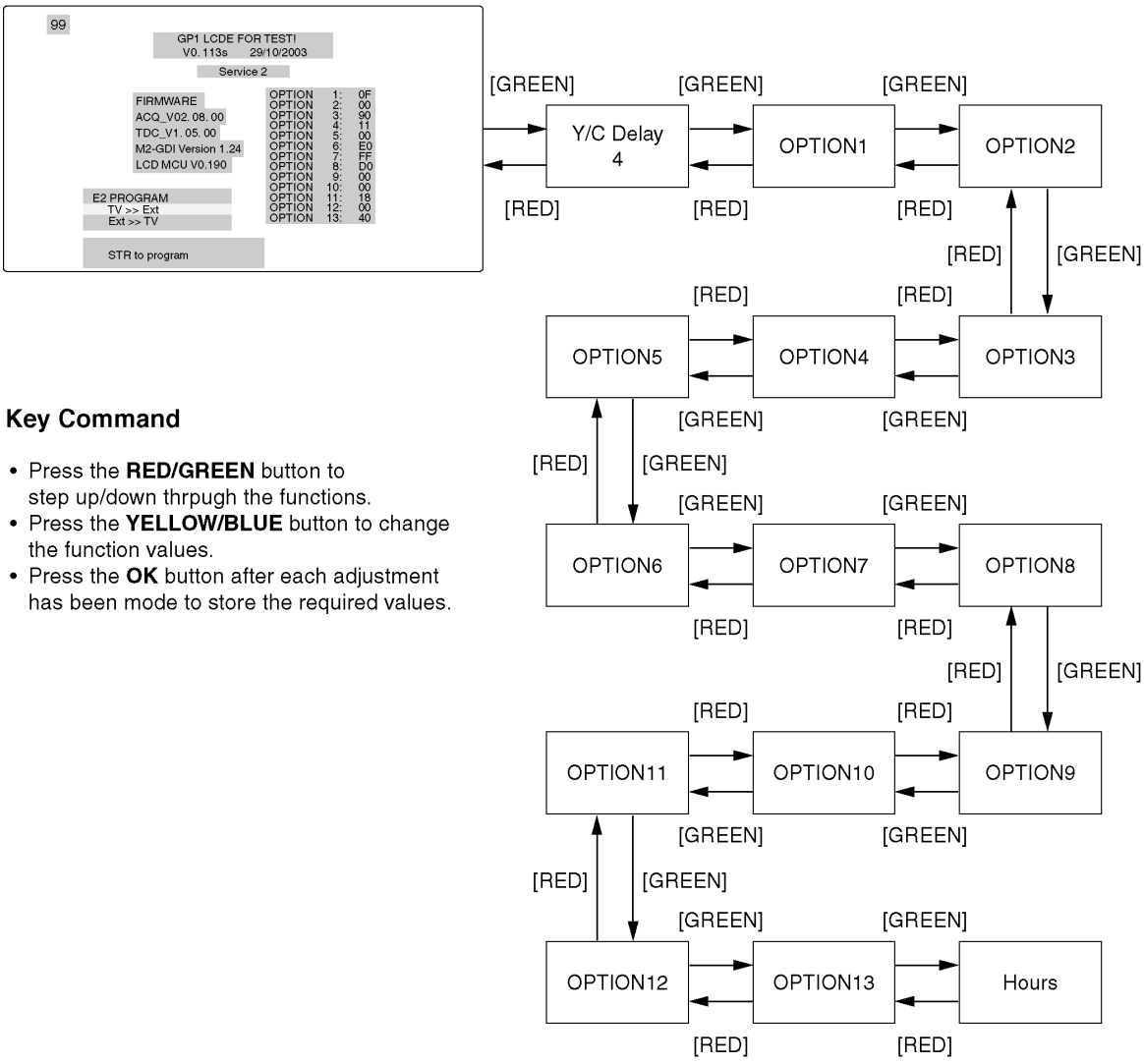
Note:

To exit to Service mode, press N or Power button on remote control.

SERVICE 1



SERVICE 2



Key Command

- Press the **RED/GREEN** button to step up/down thrpugh the functions.
- Press the **YELLOW/BLUE** button to change the function values.
- Press the **OK** button after each adjustment has been mode to store the required values.

8.3. Option Description

option1		0F		
	b0	1	Colour system	Auto(1)
	b1	1		SECAM(1)
	b2	1		NTSC(1)
	b3	1		M.NTSC(1)
	b4	0	free	
	b5	0	free	
	b6	0	free	
	b7	0	PicMenu 3D-Comb	SetupMenu(0)/PictureMenu(1) [except UKmodel(fixed:PictureMenu)]
option2		00		
	b0	0	CH Plan	ASIA / M.E. / HK/UK / CHINA(1)
	b1	0		NZ/INDNES(1)
	b2	0		AUSTRALIA(1)
	b3	0		E.EUROPE(1)
	b4	0		SPECIAL(1)
	b5	0		AMERICA(1)
	b6	0		CATV(1)
	b7	0		JAPAN(1)
option3		90		
	b0	0	sub picture	without sub-picture (0), with sub-picture (1)
	b1	0	2tuner	2tuner(1),1tuner(0)
	b2	0	VGA	enable(1)
	b3	0	AV5	enable(1)
	b4	1	Wide (16:9)	16:9 (1), 4:3 (0) (change multi window/aspect operation)
	b5	0	JPEG	enable(1)
	b6	0	SIF	I only(0), BG only(1)
	b7	1		I/BG/DK/L(2), BG/DK(3)
option4		11		
	b0	1	A2 enable	enable(1)
	b1	0		not use
	b2	0		not use
	b3	0		not use
	b4	1	NICAM enable	enable(1)
	b5	0		not use
	b6	0		not use
	b7	0		not use
option5		00		
	b0	0	A2 select 6.5MHz	5.742MHz(0) 6.742MHz(1)
	b1	0	NICAM priority	ASIA/M.E.(1)
	b2	0		HK/UK(1)
	b3	0		CHINA(1)
	b4	0		NZ/INDN(1)
	b5	0		AUSTRA(1)
	b6	0		E.EURO(1)
	b7	0		SPECIAL(1)
option6		E0		
	b0	0	Ext. HV input	without HV input(0) / with HV input(1)
	b1	0	SASO enable	SASO enable(1)
	b2	0	Noise mute	Noise mute enable(0)
	b3	0	Monitor out AV1 mute	Monitor out AV1 mute(1)
	b4	0	Tuner no refresh	Refresh tuner (0), no refresh (1)
	b5	1	Tuner	MACO tuner (1), Others (0)
	b6	1	HYPER	UHF only (0), UHF/VHF (1)
	b7	1	IF I2C	I2C controlled Tuner IF module (1)
option7		FF		
	b0	1	Power up EC-Mode	Power on EC enable (1)
	b1	1	CH Blanking	Blanking enable (1)
	b2	1	AV Blanking	Blanking enable (1)
	b3	1	Auto WIDE	WSS enable only in aspect Auto (0), WSS always enable (1)
	b4	1	Volume correction	TV Volume coorrection enable (1)
	b5	1	AVLink	Q-Link off selectable in menu (1)
	b6	1	MPX/NICAM display	Display NICAM (0), Display MPX (1)
	b7	1	Owner ID	not use

option8		D0		
	b0	0	Teletext CH Refresh	not use
	b1	0	Geomagnetic Sensor	Geomagnetic sensor enable(1)
	b2	0	Geomagnetic Polarity	Geomagnetic polarity +(0), -(1)
	b3	0	RF Attenuation	Enable(1)
	b4	1	Fine tuning	Enable(1)
	b5	0	Search speed	Slow(1) Fast(0)
	b6	1	TEXT	Enable(1)
	b7	1	TEXT TOP	TOP enable (1)
option9		00		
	b0	0	Jpeg auto start	enable (1)
	b1	0	3D Subwoofer	Subwoofer enable (1) Dolby model should be 0.
	b2	0	Dolby Virtual	Dolby Virtual enable (1)
	b3	0	Amp	with Amp(0) / without Amp(1)
	b4	0	SoundExt.DA	without SoundExt.DA(0) / with SoundExt.DA(1)
	b5	0	shipping Sound menu	MUSIC(0) / CINEMA(1)
	b6	0	Volume curve	Volume curve1(0), curve2(1)
	b7	0	LIPSYNC	LIPSYNC enable (1)
option10		00		
	b0	0	OSD language	not use
	b1	0	ACI all country / Lang	ACI enable(1), only Netherlands(0)
	b2	0	ACI auto MP	ACI auto multi package enable (1)
	b3	0	ACI offset	ACI offset for VCR prog. enable(1)
	b4	0	Blue Back	not use
	b5	0	Auto Aspect	Reserved
	b6	0	Protect XPR	Reserved
	b7	0	Protect 5V detect	Protection input enable(1)
option11		18		
	b0	0	Acuity Demo	enable(1)
	b1	0	Picture Shift	enable(1)
	b2	0	Shop mode	enable(1)
	b3	1	User aspectJust	enable(1)
	b4	1	User aspect 14:9	enable(1)
	b5	0	NICAM C4 bit	enable(1)
	b6	0	ID-1	enable(1)
	b7	0	1080I	enable(1)
option12		00	**Option**	
	b0	0	Asia	Asia(1),europe(0)
	b1	0	Australia	not use
	b2	0	Ireland /India	Ireland(1)
	b3	0	UK	UK(1)
	b4	0	MELCOA	not use
	b5	0	28 inch	not use
	b6	0	Large size	not use
	b7	0	free	
option13		40	**Temporary**	
	b0	0	Jpeg Burn Protect	Enable(0), Disable(1)
	b1	0	Tuner IF 38.9	38.9MHz(0). 39.5MHz(1) [UK/Ireland]
	b2	0	NewALBD	Zoom1 or Zoom3 (0), Zoom1 or 14:9(1)
	b3	0		not use
	b4	0	Viewing Mode	Each Mode(1) / Each Source(0)
	b5	0	TEXT refresh for Euro	enable(0), disable when TV(1)
	b6	1	Still	enable(1)
	b7	0	PicMenu AI/MPEG	Enable(0) [except UKmodel (fixed:Disable)]

9 Adjustment method

9.1. Video Signal Level Adjustment

9.1.1. RF video

Instrument Name	Connect to	Remarks
Remote controller Internal signal (studio color bar)	RF input	

1. Receive full color bar by RF signal input.
   (Aspect mode : wide, Viewing mode: standard, LCD AI: OFF)
2. Go to "Auto Y Gain" under Service 1 and make automatic adjustment of video signal level by the blue key.
   - When Service 1 appears, presetting takes place automatically as shown below.
   - Sharpness: 0
   - AI: OFF
   - 3D-Comb filter: On
3. Press STR key to write the value of adjustment results to EEPROM.
4. Check that the automatic adjustment of video signal level has completed normally.
   - When the adjustment is completed normally, the "Auto Y Gain" color turns black.

Note:

In the adjustment mode, the M2 MCU changes automatically to the mode shown in the left.

9.2. WB Adjustment

Instrument Name	Connect to	Remarks
1. Remote controller 2. LCD WB meter (Minolta CS-1000 equivalent) 3. Communication jig 4. Computer for external control		Correlation can be also taken by CA-110 or equivalent

- Basically perform checking using the production software and make automatic adjustment using external computer.
- Let the panel stand for more than 3 hours at more than 20°C.
- Basically perform assemble to completion in the ambient environment of room temperature more than 20°C.
- The aging time is more than 20 min at above room temperature.

1. Enter into WB adjustment in the plant adjustment mode and measure the WHITE brightness data to check that it is higher than 400 cd /m^2
   (When it is below 400 cd /m^2, make re-measurement in 30 minutes after cold-on.)
2. For the Excel calculation sheet, use "LX1 series, calculation software".
3. Using the jig, measure the brightness and chromaticity coordinates of single colors, white, red, green and blue, at the maximum brightness (using basic data) and calculate the gamma data corrected at the maximum brightness using Excel calculation sheet on the external computer.
4. Write the values calculated in 3 above in the gamma data part in EEPROM.
   EEPROM Adr :
   0C58h - 0C5Bh, 0C5Ch - C5Fh ...R(color temperature Normal)
   0C08h - 0C0Bh, 0C0Ch - 0C0Fh ...G(color temperature Normal)
   0C30h - 0C33h, 0C34h - 0C37h ...B(color temperature Normal)
5. Reflect the data in 4 above and select gray and measure the brightness and chromaticity coordinate at that time and calculate the gamma data (color temperature, normal) and cool and warm color temperatures, corrected at half-tone, using the external computer.

6. Write the values calculated in 5 above in the gamma data part in EEPROM.

   EEPROM Adr:

   0C58h - 0C5Bh, 0C5Ch - 0C5Fh ...R(color temperature Normal)

   0C08h - 0C0Bh, 0C0Ch - 0C0Fh ...G(color temperature Normal)

   0C30h - 0C33h, 0C34h - 0C37h ...B(color temperature Normal)

   0C50h - 0C53h, 0C54h - 0C57h ...R(color temperature Warm)

   0C00h - 0C03h, 0C04h - 0C07h ...G(color temperature Warm)

   0C28h - 0C2Bh, 0C2Ch - 0C2Fh ...B(color temperature Warm)

   0C60h - 0C63h, 0C64h - 0C67h ...R(color temperature Cool)

   0C10h - 0C13h, 0C14h - 0C17h ...G(color temperature Cool)

   0C38h - 0C3Bh, 0C3Ch - 0C3Fh ...B(color temperature Cool)

7. Reflect the data in 6 above and CHECK that the chromaticity coordinates at check and GRAY, are within the values given below.

   CHECK: x= 0.264 ± 0.005 y= 0.269 ± 0.005

   GRAY: x= 0.268 ± 0.005 y= 0.267 ± 0.005

   - When writing data into EEPROM, make this procedure after sending the WP (write protect) cancellation command (70 88 00).

   Also, WP (write protect) setting command is 70 88 FF.

8. EEPROM DATA saving place for WB (gamma data) backup

   <Housing address> <Writing address>

   0C18h - 0C1Bh → 0C08h - 0C0Bh

   0C1Ch - 0C1Fh → 0C0Ch - 0C0Fh

   0C40h - 0C43h → 0C30h - 0C33h

   0C44h - 0C47h → 0C34h - 0C37h

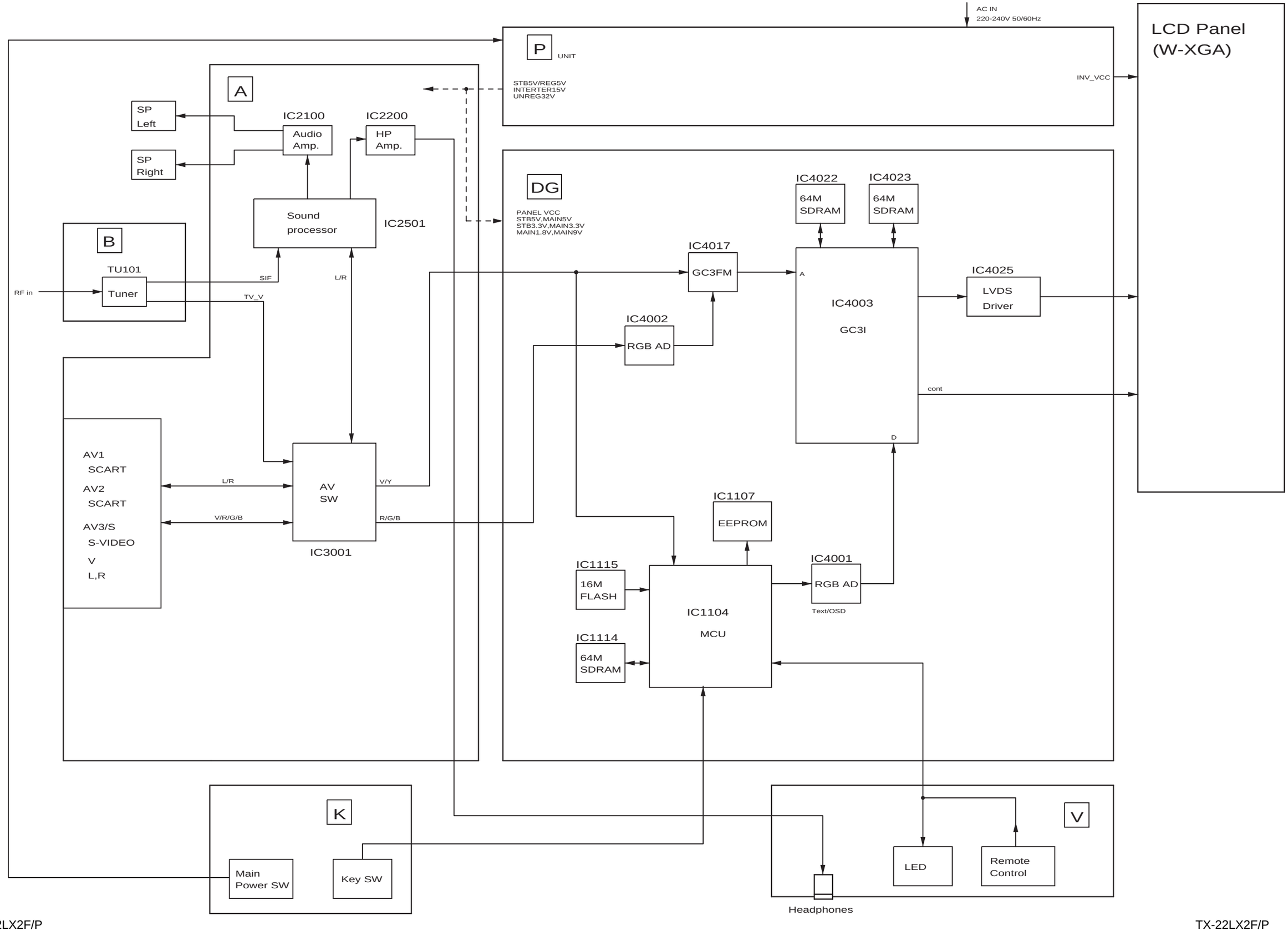
   0C68h - 0C6Bh → 0C58h - 0C5Bh

   0C6Ch - 0C6Fh → 0C5Ch - 0C5Fh

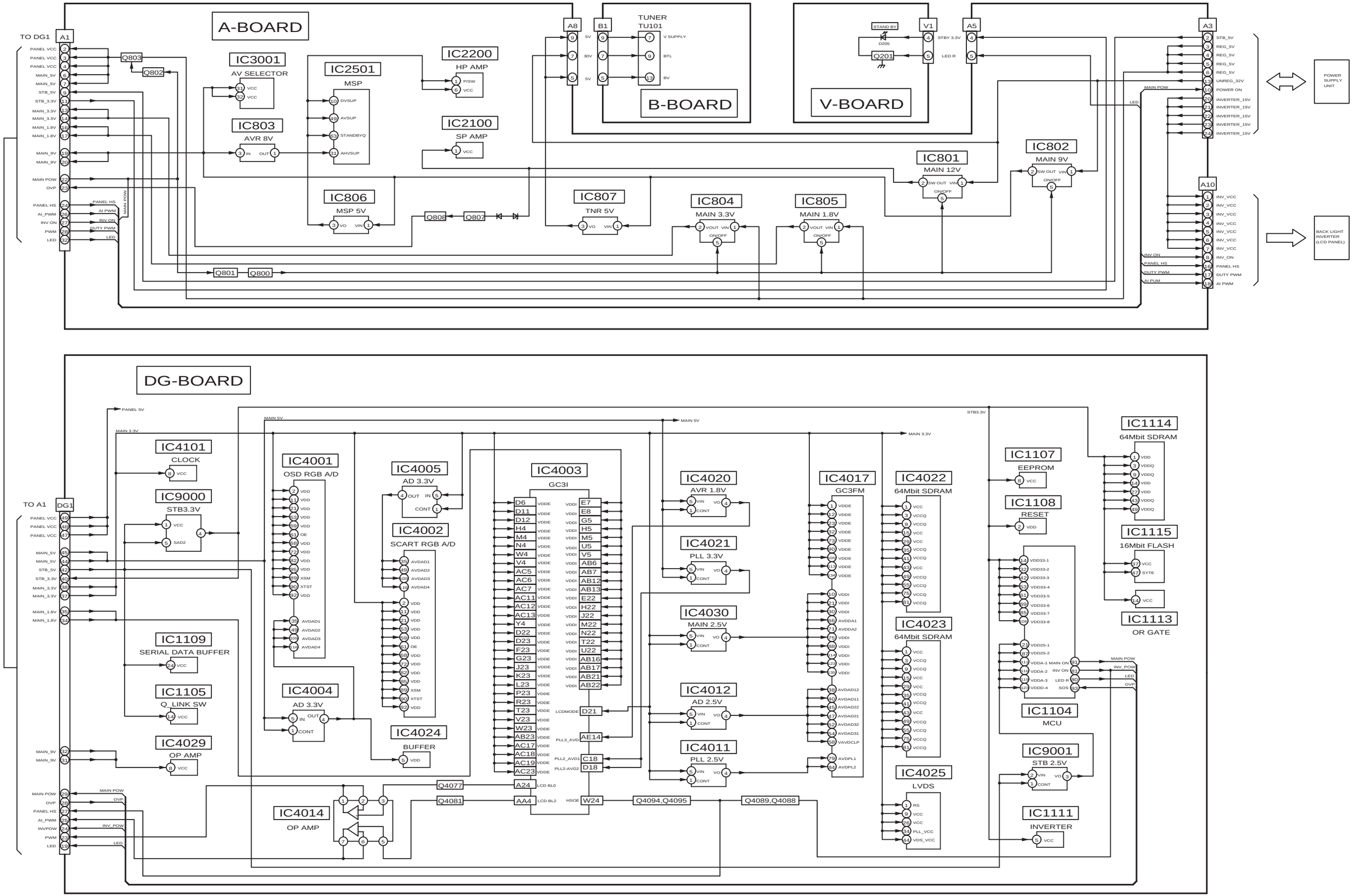
Note:

After completion of adjustment, record the completion time if it took more than 35 minutes after aging.

LCD panels that do not fit in to the above check specification shall be discussed separately.

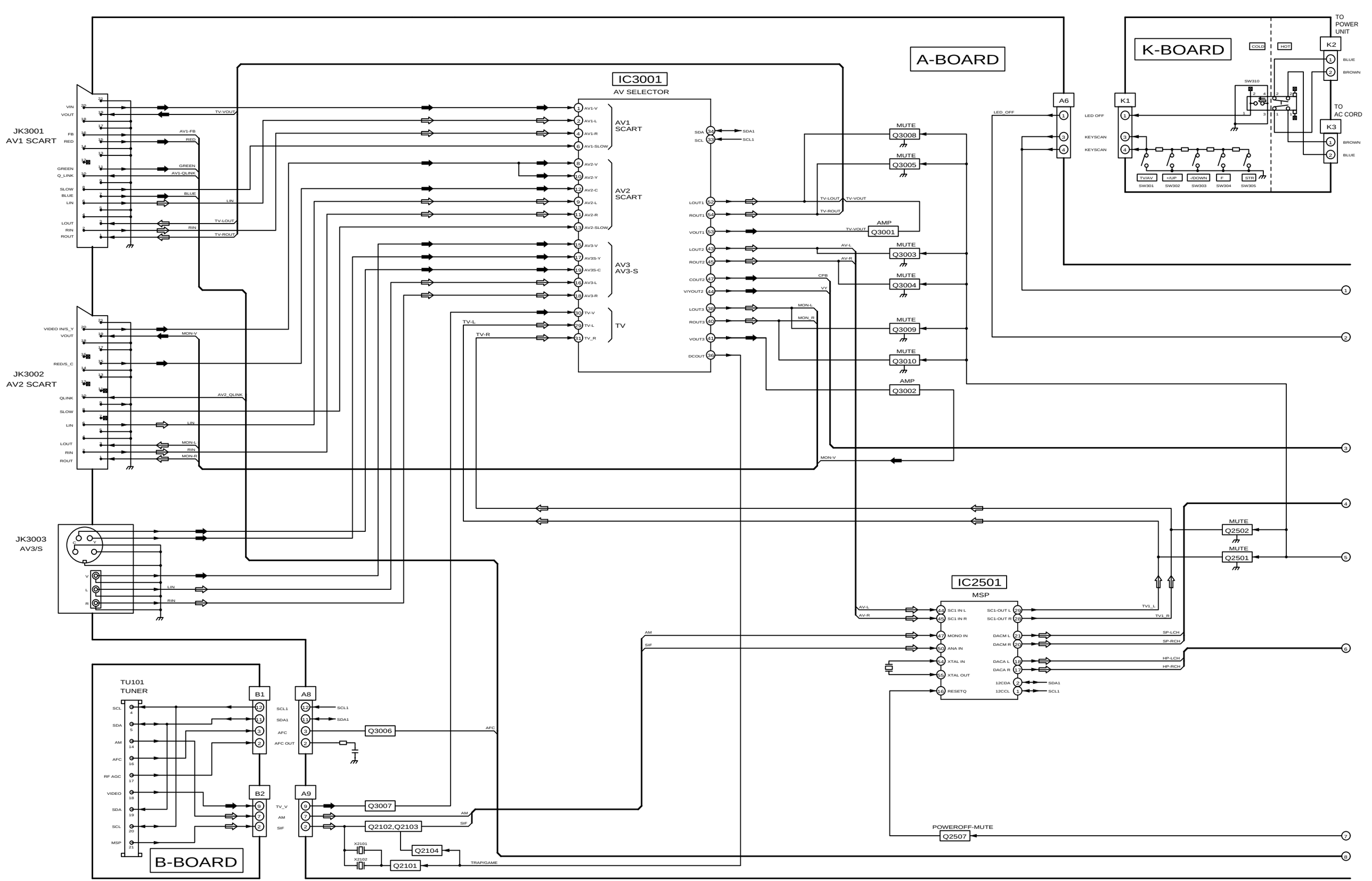


TX-22LX2F/P
Main Block Diagram

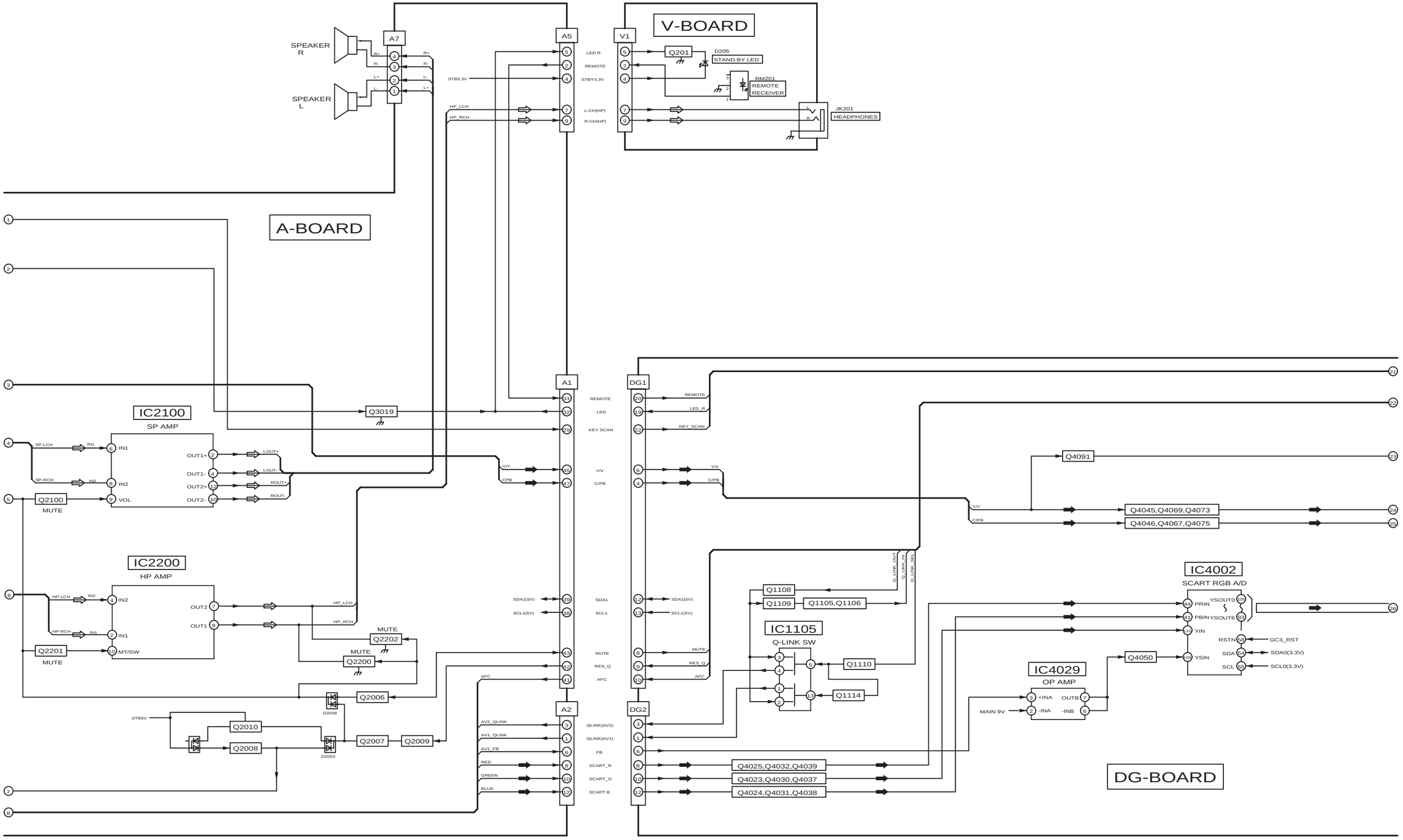


TX-22LX2F/P
Power Block Diagram

TX-22LX2F/P
Power Block Diagram



TX-22LX2F/P
Signal Block Diagram



TX-22LX2F/P
Signal Block Diagram